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ABSTRACT

These proceedings contain the texts of, panel reaction to, and panel discussions of the papers presented at the national conference on "Vocational Education and Training Policy for Today and Tomorrow." Included in the volume are the following conference presentations: "Trends and Changes in Federal, State and Local Government Roles during the Remainder of This Century," by David B. Walker; "Social and Demographic Trends and Changes during the Remainder of This Century," by Sue G. Lerner; and "Trends and Changes in the Economy during the Remainder of this Century," by William P. MacKinnon. The complete texts of the reactions to, and the panel discussions on, these three papers are provided along with the text of a panel analysis of policy for vocational education and training. Concluding the proceedings are an agenda; a list of conference speakers, moderators, and panel members; and a list of the names and addresses of registered conference participants. (MN)

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PROCEEDINGS

NATIONAL CONFERENCE ON VOCATIONAL EDUCATION AND TRAINING POLICY FOR TODAY AND TOMORROW

March 15-16, 1984

Sponsors

National Advisory Council on
Vocational Education

National Center for Research in
Vocational Education

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The National Center for Research in Vocational Education
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Columbus, Ohio

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FOREWORD

The conference reported in these proceedings originated with the Futures Committee of the National Advisory Council on Vocational Education. The Council, recognizing the many changes that our country is undergoing, saw the need to draw together information on these changes and assess their implications for vocational education and training programs. This conference became the vehicle to accomplish these objectives.

George Fellendorf, the chair of the Futures Committee of the National Advisory Council, sought the support of the other cosponsors in the planning and conduct of this conference. Each of the cosponsors contributed staff and financial support. The coordinating committee consisted of Dr. Fellendorf; Stephen Baldwin, National Commission for Employment Policy; Ralph Bregman, National Advisory Council; Charles Buzzell, Office of Vocational and Adult Education, U.S. Department of Education; and Morgan Lewis, National Center for Research in Vocational Education. Morgan Lewis's editing and Sherri Trayser's word processing of these proceedings were supported financially by the National Advisory Council with funds provided by the National Commission.

The National Center is pleased to make these proceedings available to those interested in the preparation of the nation's work force.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

PREFACE

This document represents a virtually verbatim transcript of the total conference proceedings. It is not completely verbatim because all speakers and panelists were given the opportunity to review and edit a typed transcript of their presentation. This assured that their spoken words had been accurately transcribed. Introductory remarks and questions and comments from the audience were edited by Morgan Lewis.

MORNING SESSION

MARCH 15, 1984

The conference was opened by Edward Miller, Chairman of the National Advisory Council on Vocational Education, who introduced Dr. Bruce Merrifield, Assistant Secretary for Productivity, Technology, and Innovation, U.S. Department of Commerce. The Commerce Department provided the facilities for the conference and Dr. Merrifield welcomed the participants.

DR. MERRIFIELD: Thank you and welcome to the U.S. Department of Commerce. We are delighted that you could come join us here and anything that we can do to make you more comfortable or help you in any way, I hope you will let us know. Paul Braden and other members of our Commerce staff will be here.

You know, this is a critically important time in our history. We are faced with major forces of change that are restructuring U.S. and world economies continuously. The explosion of technology over the last 30 years that created something like 90 percent of everything we know in the sciences, is obsoleting facilities and equipment long before their useful lives can be realized. The skills and knowledge base that goes into those is also changing as rapidly.

The estimates are that we are going to be pushing 500,000 to 1,000,000 people into the job market every year from now on as this pace of change quickens. There will be many more jobs than there are people because the opportunities for new business are exploding; but the skill mismatch is there and this has got to be one of our most important social problems of the next decade and beyond. The problem is one of continuous reskilling of our work force and of ourselves. You and I have to have this as our top priority to continue to grow and learn all our lives.

My immunologist friends tell me that we will probably wipe out all the viral diseases in this decade, including cancer, but the interesting thing about this of course is that aging is primarily associated with low-grade forms of viral disease that attack certain tissues. Barney Clark had three different viruses that destroyed his heart. Alzheimer's disease, senility, is a viral-mediated disease; so is hardening of the arteries, and so forth.

As we wipe out these viral diseases, the life span is going to be rather significantly extended, and my immunologist friend tells me that if I can just make it through the next five years, I might live to be 120 to 140. Well, I'll tell you, we are going to have to learn a lot of things between now and then if we live that long; and think what that's going to do to Social Security as well.

I think one of the most important problems we have, again, is the continuous learning and recycling and the vocational education process. We have at hand now, for the first time in history, a remarkable opportunity to upskill the quality and productivity of the educational process, not only for our school systems but for life-long continuing education. This has got to be the great frontier now of education, from 22 on, as we continually reskill ourselves all our lives. Any set of skills can be obsolete in five to ten years.

This technique or capability is basically the video disk with Star Wars-type simulation in a computer interactive terminal. Initial studies in the early grades have indicated anywhere from 100 to 500 percent greater rate and quality of learning using these systems.

IBM has just completed a 10,000-person early grade reading study program and what they find is that these systems are colorblind; the blacks do just as well as the whites, which you obviously would expect. The productivity is enormous; the kids break into the schools at night to get more time on the computers. It is a very exciting technique. It is something we have to adapt not only to the school system, and it has to be one of our top priorities now. We have the delivery system now for the first time, the software, the hardware and all the capabilities at a reasonable price. What we have to do now is to begin to pull that technology and that capability into our educational system and our vocational training systems. This is going to be an exploding business; it is going to be a great frontier for education.

What we are trying to do right now here in Commerce, among other things, is to inventory all of the scattered efforts that are now going on in this area and collect them perhaps into critical mass efforts. We want to use R&D partnership as a mechanism for funding further development so that we can get these into our schools, into our industrial efforts, and so forth. A lot of people like IBM and Xerox are already beginning to use these things, but we need to do this on a much broader basis. This is going to be one of the great frontiers of our lives.

This is the nature of things that are going to come. More change will occur in the next 10 to 20 years than has happened in all of history as these massive forces for change, the world markets, impinge on our domestic scene and continuously restructure U.S. and world economies over this and succeeding decades.

Again, welcome to Commerce. I hope you have a good meeting and I hope that we can find ways to work with you in any way we can. Thank you very much.

MR. MILLER: Thank you, Dr. Merrifield and we are very pleased to be here in this auditorium at the Commerce Department. It is my pleasure to set the tone of this conference in a greeting to you this time. I have been in education now for almost 30 years and I can't begin to remember how many conferences and meetings, seminars and workshops I've attended. I'm sure it numbers in the thousands as it does with most of you.

It is always interesting to me, even 29 years or more ago, that every time you would introduce individuals to give greetings, they always immediately have to leave and never can stay for the conference. I've always said that some day when I become a man I will be able to do that too. Today may be that day.

I, unfortunately, do have to leave for Phoenix. The Board of Directors of my organzation, Future Business Leaders of America, is meeting in Phoenix, and I have a stop to make in Houston on the way to deliver a keynote address to a conference, so I unfortunately will not be able to be with you for this entire conference, but I will be here in spirit because this is without question one of the most meaningful meetings that I think we have ever put together.

To my knowledge, it is the first meeting that brings together as conference sponsors the National Advisory Council on Vocational Education, the National Commission for Employment Policy, the Department of Education and the National Center for Research in Vocational Education at the Ohio State University.

This conference grew out of concern by NACVE, shared by the other sponsors, over how effectively education and training programs will respond to the fast and ever-changing needs of the work place, as well as the needs of students for training and retraining which will provide them with the skills to participate productively in the work place.

There was also a concern over how much we really know about the economy of the future and the society of the future and how to translate what we might learn and project into effective policy. As a result of these concerns, which the Council shared with the other Commissions and Councils and the Department of Education, when I became Chairman of this Council in April of 1982, I appointed a Futures Committee with Dr. George Fellendorf as Chairman. You will hear from George and I will introduce him formally later in the program.

The members of that committee will serve on this program throughout the conference. These concerns we found were shared also by the 57 states and territorial advisory councils across the nation and several representatives from those will also be on the program. The background paper by Dr. Richard Ruff, which many of you I am sure have read, was a joint project by the National Council and the state councils.

Over the past year-and-a-half, this Futures Committees, has had a number of meetings here and around the country and with various groups and individuals to discuss the impact of future trends on education and training. The Committee has participated in the World's Future Society Meeting, here in Washington last summer, and these discussions are culminating in this conference today and tomorrow.

The Council has also, over the past months, talked with many business leaders and employers across the Nation. Last calendar year, NACVE counducted five major forums across the Nation on business and vocational education. We brought together, in the cities of Dallas, Atlanta, San Francisco, Chicago and Boston, representatives of the private sector to discuss with us their prospective on vocational education.

The Council's report on these five forums entitled, "A Nation at Work--Education in the Private Sector," will be published, hopefully, later this month or early next month, in conjunction with the National Alliance of Business.

What NACVE heard in these forums, from employers large and small, was their dependence on vocational education, their desire to see it improved and strengthened so that it can meet the needs of the fast-changing job skills and new technology we are facing, and their willingness to participate in a viable partnership with education to help upgrade these programs and keep them current. A limited number of copies of this report will be available from NACVE and copies may be purchased from the National Alliance of Business as soon as it is printed.

I believe the development of partnerships between education at all levels with business, labor, employment and training programs, and other entities is one of the very keys to effective planning for future in the area of vo tech education and training. I am sure that partnership, and I emphasize partnership, is one of the themes that we'll hear today and tomorrow, more and more, stronger and stronger.

As we begin this conference, I would like to offer a charge and also a caution. The caution is against engaging in crystal ball gazing and flights of fancy. We each have our own favorite predictions of the world of the future, but I hope that we will all stick close to common ground and not stray too far afield in a world of fancy. The charge is to focus on what we know, what is practical, and what can be acted upon by policymakers and administrators to make technical and vocational education and training responsive to the changing world of work.

I do not expect that we will come out of this conference tomorrow afternoon with the answer to what should be taught in the year 2000 or how many job openings will exist in each category; but I do hope that when this conference closes tomorrow afternoon that we will all, participants and audience, have a better understanding of the expectations of the vocational-technical world in education, and improvements and changes which may be needed and possible approaches which might be utilized to assure that the vast vocational education and training enterprise lives up to those expectations in the future.

This conference that the Futures Committee has planned for us, in cooperation with these other agencies and commissions, could not come at a more opportune time. As you know, the House of Representatives last week passed a new vo-tech education act. The Senate is at work on its version. Barring unforessen circumstances, we will probably have a final bill by the end of the summer which will guide vocational education for approximately the next five years. The new legislation will certainly expand the role of business and labor in vocational education, and provide some mechanism for better coordination between vocational education and the JTPA.

I believe that the deliberations here today and tomorrow will have relevance as the provisions of a new act are put into operation. I anticipate that the final version of the legislation will have greater flexibility and discretion on the part of the state and the local recipients. While I do not expect we will come up with hard and fast answers here, I do expect that we can help define parameters and pose questions which should be considered by those who exercise discretion in implementing the new act.

I think, and I hope you share my thoughts from looking at the program, that we have an excellent agenda. I know that we have a strong group of participants and I urge all of you in the audience to join with those on stage at each session to participate fully and freely as you have a great amount of background and experience for input into this program.

As any and every chairman of any commission or council knows, no program such as this is put together by one person. No program such as this just falls into place. I would like to, at this time, introduce to you the staff of the National Advisory Council on Vocational Education. Many hours have been spent working with the committees on this program and I think these people deserve your recognition.

First, the Executive Director of NACVE, Jim Griffith. Dr. Ralph Bregman, Director of Research for NACVE. I am pleased to introduce from the NACVE staff, George Walrodt, and for the first time his new title effective today, Deputy Executive Director. The other member could not join us, has to stay in the office, answer the phones, greet the visitors and catch all the little untied ends of the conference. Carolyn Edwards, our Administrative Assistant, is over in the office and I am sure she would like to have you drop by and say, Hi.

At this time, I would like to introduce to you a gentleman whom I'm sure is no stranger to most of you, certainly no stranger to vocational education and no stranger to Washington, D.C. A gentleman who serves as chairman of another national commission that I serve on, and a man who for as long as I've known him has certainly been a friend of vocational education. To give us comments and greeting from the National Commission for Employment Policy, I introduce the Chairman, Ken Smith.

MR. SMITH: Thank you, Ed, and good morning everyone. To those of you who are not clear about the National Commission for Employment Policy, it is a body created under the Comprehensive Employment and Training Act in 1973 with the charge--we are the only ones in the federal government that have this charge--to look over all of what government does at the federal level, related to employment. Within that, of course, clearly falls vocational education.

The Congress, in its wisdom, has decided there needed to be a formal link between the National Advisory Council on Vocational Education and our Commission; therefore I serve on NACVE and Ed, in turn, serves on the National Commission.

When we took over the Commission in late December of 1981, one of the things that was high on our agenda, was the Job Training Partnership Act, the replacement for CETA. Let me just take a minute to describe to you a little bit of what went on there, because some of the same trends and forces, that the Congress responded to and that the President gave leadership to, are seen today as the Congress considers the extension, reauthorization or changes in vocational education.

I think that it is important to underline the dramatic changes that came about as a result of what the President and the Congress arrived at on the Job Training Partnership Act. Some of the simple figures will tell you a lot about where things are going here in Washington.

Back in the days of CETA, something on the order of 18 cents on the dollar was spent on training; the remainder was spent on administration and income support. The President insisted in the future employment and training activities that the ratio be 70 cents on the dollar spent on training and not more than 30 cents on the dollar spent on administration and income support; and in the end the Congress, by large majorities in both Houses, agreed to that very dramatic new direction; training, vocational education, education, were going to be the key to the federal role in trying to help people get jobs.

Secondly, for the first time in this country, the business community was put in charge. Now that is a very dramatic move by anybody's calculations. By law, 51 percent of the people who serve on the Private Industry Councils that have the authority over $4 billion in federal job training money, must be business people--must be business people. In fact, as it turns out, our analysis and tracking shows nearly two-thirds of the people who make up the 600 Private Industry Councils in this country are from the business community; and 75 percent of those people never served before on an advisory committee or an authority committee such as this. So, what we have across the country is even a greater reliance on the business community than originally anticipated.

Secondly, we have brought into the picture of employment and training a whole new group of people from the business world. Another interesting point, I think, is that the level of participation is much higher. No longer are we at the director of personnel level or the assistant director for public information; we're at the chief executive officer level. A very high quality of business people is coming to the cause of education and training through the Private Industry Council.

I think that ought to be encouraging to all of us because it shows, and it is my view, in part is responsive to their previous participation with vocational education. They had seen that it is worthwhile, it is good business sense, to get involved in what is going on in education and training.

Finally, Congress created under the law a new title, Title III, which for the first time in this country provided substantial training money for dislocated, laid-off workers. All of that, it seems to me, offered a tremendous opportunity for vocational education. I can't tell you today that I think that vocational education is responding to it as I believe they should. The money is for training. The money has a fairly low administrative overhead availability; which means the only system in this country that has the facilities in place, has the teachers in place, has the track record in place, that the business community trusts and believes in, is vocational education. And yet I must tell you that the lingering unfortunate circumstances between CETA and vocational education continue, in my view, to hinder the kind of relationships and the sense of opportunity that now exists.

Let me repeat again that the business community is in charge and in the end vocational education ought to count on them to work out and work with them in fashioning some new relationships under the Job Training Partnership Act.

Those trends I think are important for you to give some thought to in the next couple of days, because those trends are seen again, as Ed mentioned, in the legislation being developed in the House and the Senate--a greater role for the business sector, greater flexibility at the state and local level, more emphasis on training and performance and success and results. I think these are the trends that you are going to see from here on in for the foreseeable future.

The other thing that I think ought to be troubling to all of us in the room is that my own impression over the past few years is that the support for vocational education goes up inversely proportional the lower you go in our political system. At the State legislative level, at the local level, at the school board level, we find strong support for vocational education. As you move up into the governors, and beyond into the Congress, you find, in my view, a reduced level of understanding, appreciation and support for what vocational education is doing.

I don't know quite what to attribute all that to, but it has been that way since I came to this town in the early 1970s. It doesn't matter which administration, it hasn't mattered much which Congress. By and large there is still a lingering doubt about the value of vocational education; unfair in my view, uninformed, but it's there, and some of that we have seen in the past few weeks in the discussions on vocational education.

On the plus side, however, there is strong support. Some would argue, one of the most successful federal initiatives ever, was the act that created the vocational education activities at the Federal level. It has been wildly successful. It did exactly what it was supposed to do. It provided incentives and encouragement to the State and local governments to help create the infrastructure of vocational education. It has been done. We have in this country a tremendous system, and it is done in large part through the leadership of the Federal government.

Today, however, that system is now in place and the issue is what ought to be the continuing Federal role in vocational education and that issue clearly is before the House and the Senate.

Our Commission, having gotten fully engaged in the Job Training Partnership Act, being strong supporters of that act, has now turned to vocational education. It is our conviction that for too long we have had vocational education over here, employment and training system over here, the employment service over here, and pieces of this mosiac out there. The message we are getting from Congress, from the business community, from governors, and from State legislatures is that they are not going to tolerate any longer people over here and over there duplicating each other, fighting each other, hoarding their money from each other, worrying about turfmanship problems, when together they could be much more effective in helping the people that they're all employed to help. I think some of that pressure is being seen in the legislation being drafted today in the Congress.

What our Commission hopes to do and one of the reasons we are supporting this conference, both financially and with staff, is to try to stimulate you and those who participate in the conference to look at the future of vocational education and most importantly, from our prospective, the appropriate Federal role. What should that role be, not only in the context of the legislation specifically but in part the philosophy, the guidance system that goes into the Executive Branch once the legislation has passed.

Our view is that there needs to be some very careful rethinking of that role. In light of the successes of the past legislation, in light of the challenges we face in the future, we hope that out of what is going to go in the next couple of days, we are going to help generate some sense of what the proper Federal role is.

I share with Ed a concern about trying to be overly precise about the role, however; the one thing that you can guarantee in this society is change. The other thing that you can guarantee is that whatever you think is going to happen probably won't. Some folks in the Democratic primaries have been able to demonstrate that conclusively in the past two months. That is just an example, I think, of what we are seeing out there in our economy, our political system, and our educational system. Change is the watchword; unpredictable change, causing a need to be able to respond quickly to that change. I urge you to keep this in mind as we try to look ahead in vocational education.

Finally, let me leave you with some comments on a meeting that occurred the other evening. I had the rare honor of having my counterpart, the Chairman of the Manpower Services Commission in Great Britain, to a dinner meeting with a very small group of people from the policy-making apparatus here in Washington. David Young is a businessman. He is a Tory; and a Conservative. He was appointed by Margaret Thatcher to the position. The Manpower Services Commission oversees the entire training system of Great Britain, 23,000 employees. They put a million-and-a-half people--in a country of 57 million, I might add--into employment and training programs. They've tripled their budget under Margaret Thatcher and I think it is of great interest that this new strength and initiative behind training in Great Britain has come as a result of the view given by a Conservative Thatcher administration to the needs of their country.

He said something very important and I leave it with you because I think it's something that you should hear as well. He said, we've tried to analyze what happened to Great Britain; why did we go from a 4 percent unemployment rate through the 1970s and the 1960s? Why did we go from a time when young people were almost guaranteed a job when they came out of school and we had about a 2 percent youth unemployment rate, to the point today where we have a 13 percent unemployment rate in our country, and we have an 85 percent unemployment rate among our school leavers, absent the training programs we are putting in place?

He says there are two reasons: one is because the wages of youth were too high in relation to their contributions in their early years to productivity; and, second, because vocational education was abolished in 1964 in Great Britain. Great Britian took it out of every public institution in the country and said we don't need it. We, he said, as a result of that action, have dropped 10 or 15 places in the world listing of countries in productivity, in innovation in technology, and in training people.

He added that Great Britian is today beginning to build what the United States has built since about that same year in our country. His country is now 25 years or better behind us and knows it. He said, his country made what could have been almost a fatal mistake by that decision. He said, I believe that and I think now my country believes that, and we are trying to turn around a mistake that has cost us very dearly.

Those are the two reasons in his view why Great Britain is in the straits it is in today and it is why the Thatcher government has decided to make such a new investment in education and training. He said, as he sat down, let that be a warning to you. He said, we have passed that path before you; at least don't make the same mistake we did. If anything, we hope to learn and do what you have done.

So with those two thoughts, let me say that we in the Commission are anxious to get the outcomes of this conference. We intend to stay very visible and active in pursuing the future of vocational education and we very much appreciate your being here with us today. Thank you.

MR. MILLER: Thank you, Ken. I am pleased now to share with you a communique I had yesterday from the White House. Although the President would like to be with us to give a greeting this morning and to speak at this meeting, unfortuantely due to a very heavy schedule at this time, he is unable to join us. At the same time he shares our interests, sends his best wishes to you participants, the audience, all associates, and will be eager to hear the results of this conference.

I know right now prayer is a buzzword in Washington. My favorite story is the one of the father who said to his young child as he was climbing into bed, did you say your prayers? The child said, yes, I did. His father said, well, I didn't hear you. The child said, I wasn't praying to you.

This to me is a very meaningful story. Sometimes in vocational education, I hear people say, who did you say is on NACVE? Who's talking about vocational education? I mentioned the names and sometimes they say, I don't know that person; and I then say, they weren't talking to you.

It is not always the names of the people you hear all the time that are talking about vocational education to all of the people.

I think our members of NACVE have done a sensational job in giving vocational education a new look, in creating a new meaningful relationship with other commissions, faculties, and other councils.

The gentleman I am pleased to introduce right now, will introduce other members of NACVE and of the panels, is no exception to all of this. Dr. George Fellendorf, among his many, many achievements, has chaired the Futures Committee of NACVE since the appointment in April of 1982, and his efforts, along with those members of his council, can be seen in the conference here today.

George is renowned far and wide for his working with the deaf and is currently exploring the use of computers for the education of handicapped persons. The hours and the effort given to this conference by George are to be commended. It is my pleasure to introduce to you to chair the remainder of the conference today and tomorrow, Dr. George Fellendorf.

MR. FELLENDORF: Thank you, Ed, for your stimulating introduction and for setting a tone for this meeting. I'd also like to greet all of you on behalf of the Futures Committee of the National Advisory Council. We have a full day-and-a-half and I am going to dispense with anything but these greetings in order to get the opportunity to introduce the people that I think are going to make a significant contribution to our first session today.

May I introduce briefly the members of the panel and then I'll introduce the presenter who will give us the remarks to which the panelists will respond and the audience will have an opportunity to comment. Ed Graham is Director of the American Council of Life Insurance and Health Association of America. He coordinates a wide range of public relations activities for these two national trade associations.

Jack Griffith is President of Griffith Petroleum and a member of the Oklahoma Planning and Resource Board for eight years.

He is one the Governor's Blue Ribbon Task Force on County Government Reform, and he is Presidnet of the National Oil Jobbers Council.

Ed Hardman is Presidnet and Chief Operating Officer of the National Tooling and Machining Association of Fort Washington, Maryland. This is a 4,000-company trade association which is the official voice of the U.S. contract tooling and machining industry, a vitally important part of our economy. Ed also has an additional distinction that internationally, at the express request of President Nixon in 1971, he headed the Sixth American Trade Commission to the Soviet Union since World World II; and he continues his international activities on behalf of the world trade tooling and machining industry as a member of the Board of Directors of the International Special Tooling Association, A West German-based consortium of tooling industry associations from 13 nations.

Mrs. Madeleine B. Hemmings has been named Vice President of Policy for the National Alliance of Business and she was formerly Director of Education Training and Employment for the U.S. Chamber of Commerce in the United States. Her list of accomplishments and contributions to the areas in which we have interest is long and extensive and I am deliberating truncating these introductions so that we can get on with the major presentation.

I might add that Bob Worthington is listed on your program. Dr. Worthington is currently serving as Assistant Secretary for Vocational and Adult Education in the U.S. Department of Education. It is my understanding that he is not here now because he is up in Congress testifying on some budget matters relating to the very topic we are discussing today. We have every hope and expectation that Bob will join us and hopefully he will join us before we finish this panel. In any event, I think we will be able to make arrangements to hear from Bob when he actually is able to arrive and be with us.

The mode of operation here is that we are going to have a presentation, the topic this morning being on trends and changes in Federal, State and local governmental roles during the remainder of this century. Then we will have responses and reactions from the panelists and we will have an opportunity for questions and comments from the audience.

It gives me a great deal of pleasure to introduce Mr. David B. Walker, who is the Assistant Director of the Government Structure and Function Section of the U.S. Advisory Commission of Intergovernmental Relations in Washington, D.C. Mr. Walker is formerly Director of the Senate Sub-Committee on Intergovernmental Relations and previously taught Government at Bowdoin College. He is the author of a recently published book on federalism entitled "Toward a Functioning Federalism," and has written numerous articles and chapters for books. He has been a guest of several international conference on governmental affairs and is Chair of the section on Intergovernmental Administration and Management of the American Society for Public Administration.

Mr. Walker also teaches at the University of Maryland in College Park, Maryland and is at the American University in Washington, D.C. In 1980, he was the recipient of the Donald C. Stone Award for Significant Contributions to Intergovernmental Management, and the 1981-82 Adjunct Faculty Award for Outstanding Teaching at the American University.

It certainly is my distinct pleasure to introduce to you Mr. David B. Walker.

MR. WALKER: Thanks, George, that's a gracious introduction. I'm still not quite clear as to why I'm here since vocational education, as you'll soon find out, is not one of my fortes. I am a generalist preeminently, though in terms of the remarks I will be making, vocational education serves as an excellent illustration of many of the points I will be making.

The issue of functional roles is one that's still before us. There was an attempt to achieve a sorting out or clarification of roles between and amongst the levels of government in 1982. Many of you followed those historic but unfortunately unsuccessful colloquies between and amongst the governors and the President's staff. We are at a point now where we have been for the better part of a quarter of a century, where the role playing issue is still a question and where everybody seems to still be in the kitchen making a stew and there are many pots on the stove--fewer perhaps than in 1980, but still an incredible number. Everybody is still there: the Federal, State, and local folk. There's less money to work with, but the congestion and the overlap and the confusion in role playing is still very much the order of the day. Witness the legislation that you folks are interested in on the Hill today. This was not the case in 1960. This was not the case in 1963. It became the case from roughly the mid-1960s until now, with some slight recession from the high-water mark of the late 1970s.

What transpired during that period in the area of grants-in-aid, was a surge of dollars. The total jumped from $7 to $10 billion during Mr. Kennedy's period and under two very conservative Congresses; $10 to 20 and still pretty much in constant dollars under Mr. Johnson under two-and-a-half Congresses; $20 to 40 billion under Mr. Nixon working with Democratic Congresses; $40 to 60 billion for two-and-a-half years of Mr. Ford working preeminently with Democratic Congresses; and $60 to a prospectively a $96 billion fiscal 1981 though some changes were made with Mr. Carter.

In constant dollars, doubling the amounts of overall Federal aid to State and local governments occured between 1970 and 1980. In noninflated aid dollars, then there was an extraordinary outpouring of funding, an outpouring that also increased the number of programs--from 132 funded and operational in 1960 to 537 funded and operational as of December 31, 1980. Hence, though perhaps not so much in the vocational education area, there was an extraordinary proliferation in dollars, in the number of programs, and also in the number of recipients.

The 1-to-50 Federal-State relationship was characteristic of the bulk of intergovernmental relations in 1960--and this was still true as of 1963--where 92 percent of the monies flowed to state governments, like vocational education. This pattern involved an administrative situation which was relatively easy to handle. In 1960 one could look at those programs that dominated and they were all Federal-State grants. There were only four that added up to much money at all: highways, aid to the elderly, AFDC, and employment security. All four were pretty old in terms of age, or were small programs like vocational education, one of the oldest of the grant-in-aid programs.

This earlier 1-to-50 relationship shifted to roughly 1-to-66,000. This resulted from the relationship that emerged as a result of the flow of funds directly to thousands of sub-state governments. All 50 States, all of the cities and counties, all of the towns and townships, the bulk of the school districts, about two-thirds of the special districts, and thousands of non-profit organizations, the number of which nobody has the foggiest idea, were involved, creating a pinwheel pattern administratively and politically, an interest group-crafted pattern, artfully carved out from the mid-1960s through 1980. That pattern still persists. The bypassing of state government accounted for 8 percent of all Federal aid in 1960. At the end of Mr. Johnson' term, despite the criticisms from State governments, the figure was only 12 percent of $20 billion, only 12 percent. Paradoxically, with Mr. Nixon and the Democrats, by 1973-74, a point was reached where the monies had doubled and the amount of bypassing also doubled; 24 percent of $40 billion by 1973-74 bypassed State governments.

By 1977 toward the end of the countercyclical programs, CETA being one of these, along with two others, you reach a point where about 28-29 percent of upwards of $82 billion in aid bypassed State government. This is a statistical way of highlighting the panoramic theory of partnership that emerged during this period. I am not going to dwell on the administrative implications of this. In a department like HEW in the old days, the effort amounted to trying to monitor relationships between that department and thousands of units of government.

The Office of Management and Budget was trying to get an overview of the 1-to-66,000 relationship--ponder that--even with the help of all of our newer techniques of processing and storing information.

I have been criticized by some of my friends for dwelling too heavily on numbers to suggest the measure of administrative difficulty. Madison never promised efficiency of effectiveness. He was much more concerned with other values in the system. I am not mesmerized then by public administration norms which may be suggested by my stress on the large amounts of monies following or the number of programs, or the highly fragmented 1-to-66,000 situations that emerged in terms of recipients jurisdictions vis-a-vis Washington.

But there are two developments during this period that should be mentioned as a backdrop to what has transpired since 1981. One of these is the extraordinary degree of proliferation--in the types of programs aided--the degree to which the national government by 1980 was assisting what in most other systems would have been done totally by the national government as well as genuinely intergovernmental and local undertakings.

The bulk of the maintenance programs in this country still are handled intergovernmentally; that was the heart of the dialogue in 1982, between the President's people and the governors. It is still, given the failure of that effort. Most of our income maintenance programs, still are Federal-State in many instances--county programs with significant funding borne by State and local government, and with all the inequities that relate to that fact.

This has been the case for half-a-century. There's been no change in this area with the role exception of the SSI programs. There's also a range of areas which are legitimately intergovernmental; the education is one. I see no way in which many aspects of that troubled terrain could be handled except in an intergovernmental fashion.

The environment, even more; also certain aspects of manpower training and of transportation; not all, I would argue, but certain aspects, inevitably should be handled Federal-State-local, if you look at the kinds of powers and Constitutional position States have, vis-a-vis some of these program areas. Then one can switch to the other extreme and focus on the roughly 400 programs out of 537 as of 1980. Here was a parcel of pigmy programs, an incredible number of them in the educational area, many in the vocational education area aid enacted at the behest of interest groups. There were many many spigots with a few dollars dripping out at the end--to follow the metaphor crudely. I'm thinking of ESEA amendments of 1978 as being perhaps a classic example of this interest group loaded pattern that emerged in education by the late '70s, a far cry from the enactment of 1965--a far cry.

So proliferation into program areas that some would argue were private or local to begin with was the trend. I won't dwell on present examples along that same line, but the early 1980's still produce them. The right learned from the left, until the seventies. Metric education, policeman's pensions, rural libraries, fire protection, etc. by an earlier political or practical definition would have been deemed primarily local matters, for municipal or county councils, or in some instances neighborhoods. So an array of very small, petty, but symbolically potent grants emerged. They were very important politically, but the 400 only aggregated to $8 billion in outlays.

By definition the bulk of those grants were perfectly useful in only one respect, politically. They had little impact on people. They may have some on administrators and they certainly affected interests groups.

The other major and dangerous development was the emergence of regulations numerous, intrinsical conditions. You folks in the vocational education area know this perhaps more than anything else, as well as anybody else.

The issue of the Federal government regulating State and local governments--as State and local governments--was and is a new phenomenon in our system. It began regulating the private sector--first transportation and then business, agriculture, and labor, starting almost 100 years ago--1887 to be exact. But regulating States as States, localities as localities, began roughly in the mid 1960s and continued a pace, at a mindless pace, I would add. From the mid-1960s to now, new types of conditions and regulations emerged--of the cross-cutting variety, of the spillover variety (where, if you don't adhere to a specific regulation, monies in an entire functional area would be cut off) or in a few instances of just simply a dicta of the partial preemption type.

This last--partial preemption--is where the federal government preempts and then realizes it must adhere to its ancient ways of doing business--if not doing possibly the job itself. So it co-opted, either softly through the lure of a little money, an agency of State government, or it simply co-opted by mandate, providing no basis for a State to have a voluntary partnership relationship in the traditional way.

Under the soft approach to partial preemption, a State could get out with no penalties. But the bulk of the environmental programs employed the hard approach where States couldn't get out and a portion of State government in effect was commandeered by EPA, at the behest of Congress--to achieve certain environmental goals, most of which are commendable. Yet, in terms of the regulatory effects much of this was counterproductive, I would argue. Counterproductive rather than productive because the partnership idea which involves some sense of parity was lost sight of in this approach.

Conditions and the proliferation of programs into novel areas giving rise to two major results. By 1980--and I would argue even now despite some emerging common sense--the illusion prevailed, thanks to the media, thanks to interest groups, thanks to politicians of both parties, that the national agenda encompassed everything that was a public concern. Moreover, the old line between private and public that used to exist, that politicians in this city at least through the mid-1960s recognized was nearly obliterated. This line wasn't all that fuzzy back in the earlier periods. It was rather clearly demarcated and--one can go through all the functional areas--untouched by Federal regulations and money as of 1960-63 or 1964.

By 1980, one could hardly find an agency or a unit within any one of the five basic categories of local government that one way or another wasn't affected by Federal grants and the conditions attached thereto. It's important to add the conditions attached thereto.

This in turn produced shifts in roles. Presidents behaved and acted like mayors; sometimes mayors came to Washington and acted like Presidents; State legislators behaved like United States Senators; and House Members behaved very much like county council persons. There was a blurring of roles and of responsibility.

The essence of Federalism today is the need to achieve a territorial division of labor. Practically every post-industrial system, and some not so post, are struggling one way or another with some aspects of devolution. There has been deep disillusionment in practically every national capital in this post-industrial era with the extraordinary claims and pretentions of national politicians, planners, technocrats, et cetera. Whether it is Paris, Rome, or Athens, progressive attempts to achieve a significant measure of devolution have been launched.

In our own system, we were devolved in the sense that we began non-centralization. Our system as of 1960 or 1963 was functional. There were some areas of inter-level collaboration but there were significant areas of non-entanglement between or amongst the levels. Also, elections meant something. There were certain programs and areas you knew could affect an election at one level. With others you confronted an interrelationship, but these were few.

The fundamental defect, of course, was its blatant racism, not even artful racism--blatant racism. By 1980, that trait had been eliminated in law, at least. There also was a cleaner environment by 1980. There was greater access to various health facilities and programs by 1980.

Some of the goals then were commendable--and some were achieved. The issue of parity and the issue of access and the issue of fairness certainly were predominant ones during this period as well as the issue of a more healthy and sounder environment. Some of these goals were at least partially if not fully achieved; so I am not describing a totally negative situation.

In a sense I've been describing some good tendencies gone riot. Why? One reason is the of role of the High Court. A dictum handed down by the most conservative Justice of the Supreme Court in 1922 still governs grant laws despite 800 cases between 1975 until now. This relates to the conditional spending power. Here the High Court adheres to a position that essentially says a grant-in-aid is a voluntary contract between doner and donee imposing reciprocal obligations upon both. What that gives rise to in practice is the capacity of Congress to add any variety of conditions it wants to a grant-in-aid.

If you want to protect your 10th amendment virtue, you have to have the guts to say, "no". That has been the position of the Court, from 1922 to now, no change. That's also served as flashing green light for centralization. Yet centralization did not really begin to emerge until the mid-1960s. There were other constraints, in lieu of the courts, since the Court in effect did not contrain here. One was fiscal. There was a high degree of fiscal conservatism throughout the body politic and among national politicians right through the mid-1960s.

President Johnson spent some time worrying about the possibility of piercing the $100 billion ceiling--this was under the old system of budget presentations. Imagine it, $100 billion and worrying about a $5-10 billion deficit. That was the mid-1960s. But the seventies deficits of 40-50 billion hardly produced a reaction at all.

Now we finally are getting concerned about deficits again. But through the bulk of the 1970s deficits were ignored by most people. A few conservatives worried about them, but they didn't get very far. The press certainly didn't focus on them as they did in the early 1960s.

Our assumptions about the economy is the 1960s also were a factor. We prided ourselves on our extraordinary capacity and productivity and the progressivity of the federal income tax. Management of these things was assumed back in the 1960s. But by the late 1970s for the most part, most of these beliefs--about the economy, the federal income tax, and our energy resources--had eroded.

The final reason for centralization, of course, is politics. Between 1938 and 1964 there was one force which dominated the

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Congress of the United States and that of course was the Conservative Coalition. If that group of southern Democrats and midwestern Republicans could agree, and they did for the most part on many, many issues, then a significant constraint emerged on expansion of the national government.

This political condition explains why the flashing green light from the High Court was never picked up. That's why there were such incremental rates of growth in Federal involvement in State and local matters between the 1940s and the early 1960s. Incremental is the only way to describe a doubling in aid from roughly $3-1/2 to $7 billion during Eisenhower, and less gradual, but less than a billion a year under Mr. Kennedy.

Constraints, during this period collapsed then and above all, the earlier political constraints at the national level collapsed. State and local parties and the influence of their leaders declined. They still had impact, but compared to the earlier period, it had been reduced greatly. They could hardly cope with the functional, programmatic, sociomoralistic, single issue interest groups.

All of the above set the stage for Mr. Reagan. He or someone like him would have been inevitable. Mr. Reagan, after all, was forecast in no small measure by Mr. Carter. Mr. Carter's last two years were ones in which you had a pick-up in defense spending, some curbing of regulations, static growth in real dollar terms in federal aid.

There are some continuities between Carter and Reagan, administrations. And history perhaps will stress those even more than where we are at the present time.

In any event, there are four "Ds" and one "C" that add up to Reagan Federalism. The first of course, was and is, the attempt to curb the dollar drain of Federal aid to State and local government. He did this in some measure; but not the absolute point of getting real declines, as some forecast in 1981.

For fiscal 1982 he (and the Congress) pared down to $91 billion--from $96 billion. He called for $81 billion for the next fiscal year (fiscal 1983) and got $89 billion. He called for $94 billion for fiscal 1984; and he got $98 billion. There's a pattern here of the President asking for less and getting and accepting four or five billion more.

In constant purchasing power terms, the 1981-84 pattern is a static one. No absolute decline, same for one year. I would suggest that that's going to be the picture for quite a while.

A second aspect of Reagan Federalism is his attempt to decrease grants under the Reconciliation Act of 1981. The 547 were cut roughly to 400, with the figure now picking up slowly.

Some 60 programs received no money, a few of them in educational areas. Some 77 programs were merged, including roughly 34 in the education block grant--all through this Reconciliation Act. Out of that comes a figure of roughly 133, which brings you back roughly to 400.

Another "D" is the whole issue of devolution, per se, getting authority out of Washington--getting programs and funding resources out of the city. The main block grants are usually cited in this connection. We have 12 now, including JTPA, and the nine that were enacted in the Budget Reconciliation Act, and two others. That's one aspect of devolution.

Another is how these block grants have been administered, mainly with a very, very "hands off" approach, to the extent the administration permitted by law. The renewal of general revenue sharing, which of course gives significant discretion to those receiving it--now only local governments--is another significant aspect of this devolutionary thrust. And in large measure, that's where you are left with devolution.

Deregulation, the fourth "D", has largely involved personnel and administrative changes. In part, it has meant the changing of certain administrative rules and regs. In a few cases, it's involved going to court, with as Davis-Bacon, and ultimately winning a significant victory. The administration of block grants, as I indicated, is another dimension of this attempt to curb regulations.

And then there's the "C1", centralization and that applies only to 1982. There's been no hint of it since 1982. In his 1982 State of the Union, Federalism was the only topic. And in that address he called for the federalization of Medicaid, and a concommitant shift of food stamps and AFDC to the states along with several smaller ones and their needed revenue sources. It was an intricate, complex, but pioneering, historic effort. Unfortunately it was unsuccessful.

What summary adjectives do we use here? Reagan Federalism has not produced a revolution. It was a significant reaction. It's more a personnel matter than many would conceded. Certainly, many conservatives feel that much more could have been done than was. And, liberals, on the other hand, describe it in revolutionary terms, but it's no revolution.

Eighty percent of the money still flows through categorical conduits, including your program. Your program has been subject to very little by way of regulatory relief, and your associate programs (JTPA) is an exception to that.

On regulations, until one confronts the Congress, all that's been achieved to some degree could be changed tomorrow morning at

8:00 with a change of administration. But few laws have been changed on the regulatory front.

So we have to describe the real impact of most of Reagan's Federalism as relatively moderate though from the perspective of 1980, it's extraordinary. Mr. Regan's biggest accomplishment, I think, has been attitudinal. Get out there, as I try, and listen and watch. Very few people now, very few mayors, even the school people, look to Washington to serve as a source of most of their aid and sustenance.

Most of them have finally got to the point where they focus on the states as well as Washington. For the school this usually has been the case, given the amount of money that the State government now provides to education.

In any event, this attitudinal shift is significant. An accomplishment of no small measure, I would argue.

Turning to the future, certain challenges will arise that will help confirm this somewhat more disciplined condition. These are the five unavoidables. The Presidency and the Congress, despite all of their tendencies to try to shunt these aside, will have to face them. The Congress will have to play a role of a national parliament for the better part of this decade, much to it's chagrin--its not used to playing this role. Congress far prefers to play municipal council or county council or U.N. General Assembly. It's much more fun playing those roles. To play the role of a deliberative body, concerning itself with one hundred percent national problems and programs--and these five are that--is strenuous, sobbering, and sometimes shattering. Not one of them can be shifted to Richmond or Annapolis or Boston or Sacramento or Springfield. They are here in Washington, and will be resolved here.

The first challenge, or course, is the hemorrhaging condition of Medicare. We've already had one or two hints in a couple of articles by the task force indicating the sad position fiscally of the program. That's an immediate problem. Whoever comes in in 1985 is going to have to look at it immediately.

A second, and its starting to get a little attention--the actuarially unsound condition of military and civilian pensions. That's a second megabuck problem that also will probably require some constraints injected in as well.

A third is the probable reemergence of Social Security in the early 1990s. We had the bailout last year. My best guess is that will get us through the early 1990s. I hope it is longer than that, but alot of the experts are pessimistic on this score.

A fourth is the interest on the debt. Last year for the first time, the payment on the Federal deficit surpassed all of

Federal aid to State and local governments, since it exceeded the $100 billion mark. What we pay on the debt is unavoidable. If the Federal government defaults on that, we've got real problems.

Finally there's defense. I would say, regardless of who the Democratic nominee is--and clearly with Mr. Reagan running--we'll be someplace between five and seven percent real growth annually on defense outlays for the rest of the decade. We are near a consensus, I think, with regard to this level of defense spending.

Where does this leave us? With two kinds of fall-out. Whoever is President or in control of Congress throughout the rest of this decade, will experience a kind of reemerging discipline. It's the discipline of the deficits and these are unavoidable. In the 1970s, I would say we didn't have much discipline.

From the State and local angle, I would suggest two kinds of problems. One is the probable continuation of the regulations and the other is static to meager growth in grant outlays. Neither are happy prospects, clearly.

With this the State and local partnership will become more important. In the educational area, it has always been that kind of partnership, since the States are the creators of the bulk of our public educational institutions, and the source of much of their funding.

So there's kind of an optimistic theme here. Discipline is re-emerging in a rather Draconian way, but it is re-emerging. That's a good trend, I would argue.

From the State and local angle, the slowing of aid would not be so bad, if the conditions that went with it were freed up more. My worry is that the rate of growth won't change much, but the conditions won't either. And that leaves me with some anxiety from a State and local perspective.

(At this point Mr. Feilendorf asked the audience to recognize the representatives of vocational student organizations who assisted in the conduct of the conference. He then called a short recess.)

Following the recess Mr. Fellendorf introduced Madeleine Hemmings.

MS. HEMMINGS: Thank you. I find myself thinking about what really to say in response to what Dr. Walker has said. I worked at the practical level, I guess, wondering what the public policy ought to be and then trying to work and carry out what business people think they would like to see happen with regard to employment and employability issues in Washington.

I think there's a firm belief in the business community that the vocational education system probably hasn't yet been understood relative to its true importance in the economy. It's as important as it could possibly be, at the moment, but as we move into the next 20 years, the country will have an even greater retraining interest. The vocational education community will become even more important.

We think that it is extremely important that we lock heads at this point, with you and also with the labor people, to find very practical ways to work together. And that really is our commitment at this moment.

As I listened to Dr. Walker, and I began to think about the problems of regulation, and what it is we want from the federal government, I have to say that I haven't yet seen the vocational education community stand up and ask for deregulation.

There have been some discussions. We have had many of them among ourselves in the business groups about what in fact is the federal role, what can it do best, and what should it do with the fairly limited amount of money. Then we look at the political situation and say, but everyone still wants it to do a great number of other things. If we really want the deregulation, the vocational education community will have to go and demand it. I don't think that outside forces can get it for you or perhaps even should.

But it seems to me that, looking at the education community in general, in many ways it likes a good bit of regulation and it likes to be able to say to the rest of the world, I'm sorry; I can't possibly do whatever it is you think you need done as a consumer of education, be you an employer or student, because we have all these regulations that the federal government lays on us and therefore we have to do all these things and we can't do what we need to do.

If you really don't believe that, why aren't you asking the federal government to get off your back. I think regulation is to some degree a very nice shelter. I think we're really going to have to deal with that in the next ten, twenty years. We're going to have to decide whether we really are going to be what we think we want to be, which is excellent, or whether we want to be safe and really hidden in many ways from the open comments and discussions that might go on as a business moves into contact with its consumer.

I am not saying this insensitively, nor am I saying it without understanding. Really, many forces are attracted to the idea of making education a political scapegoat at times and educators have every right to avoid being put in that position. But there is at a deeper level, a very real need to re-establish, and to strengthen the relationship between education and its consumers. As that happens and as we find ways to do that, there will be very much increased political support for education.

Americans believe in education. Americans business people believe in education. They need, I think, some reassurance and some contact with the great people that really do in fact operate education. We need to find ways to build that. We need to find ways to really talk to each other about the problems that we really share. If we can find ways to do that, I think that the pay-off in terms of support at the State legislative level and local legislative level will be enormous.

I think that we ought to spend some time, particularly you people who are leaders of the vocational education system, thinking about how we are really going to do that over the next couple of years.

I would like to say one thing more, about the advisory councils. We are strongly supporting stronger advisory councils or no advisory councils. We think--very sincerely--that lots of advisory councils, about lots of things, that don't really do anything, are really not a worthwhile way of people spending their time. We don't really want to have to go out and round up business people to symbolically sit on committees and say to them, please say nice things about the education system, even though you can't get any information and you don't know what's going on, and they don't really want to hear from you anyway.

I think that we ought to get away from that. If we are really going to work together, we ought to find ways to run the right people for the school boards or we ought to take the boards and strengthen them. Then if we still want advisory councils, which we are supporting in this legislation, we ought to make them stronger so that somebody has to listen to what they say.

We think, for example, that one of the real contributions that the state advisory council can make is to look--with other organizations within the state, if you wish--at what is the labor market; and whether or not the plan that is coming out of vocational education in fact really does look at where the labor market is and where it is growing? Where the developing opportunities are.

Somebody should spend some very serious time thinking about that so that there are gradual transitions within the education system, so that education system is given a chance to adjust to the trends. An organization should be in place that can look around and get the kinds of information education needs. If business isn't giving in to them, the organization should then go and ask business for it. Persuade business that, in fact, it must share what it knows and what it is planning with the educators, or don't criticize educators for not giving business what it needs.

So I'd ask you to think about some of these things in your deliberations. I have to go to my own board meeting. I'd rather sit here and listen to your comments then probably anything else today, but I would hope very much to get back tomorrow and have a chance to listen to your thoughts about where we ought to be going in the next ten years.

Thank you, very much.

MR. FELLENDORF: Our next panelist, with his five minutes, is Ed Graham.

DR. GRAHAM: The theme of this conference and the address which we have heard reminds me of a conference we held a few years ago entitled "Change or Revolution." The key question was, are the attitudes, needs, and institutions of our society changing at such a rapid pace that our social institutions will be unable to accommodate those changes; or are they changing at such a rate that, given the time alloted, we can adjust to the changes sufficiently to retain the social, political, and educational institutions currently in place?

I think this conference has to confront that question, as it relates to the changing employee-employer needs of our society. The work place and job skills are changing so fast, and the time frame is so limited, that we must take immediate steps to develop and strengthen existing education and training systems and replace those elements that are no longer cost-effective. Can vocational education meet that challenge?

America needs 15 million new people in the work place within the next decade. Most of those people are now in the educational system. The great concern is that many of them will show up at the office, laboratory, or factory poorly prepared for the job they will be expected to perform. And when they arrive, they will meet employees who are poorly equipped to do their current job and unable to change sufficiently to perform in the changing job market of their employer.

In this environment, American business, the employers, are spending millions of dollars to train and retrain their employees. In the financial services industry, which I represent, I am told that at least 25 percent of those businesses have developed shadow educational programs to meet emerging needs and to compensate for the inadequate training employees received prior to employment.

I'd like to elaborate on that point just a bit and then suggest 11 characteristics of vocational education that I think are needed in the future. The United States has entered the "information society." Estimates indicate that 60 percent of the work force is employed in information service jobs, especially in the financial services field which I represent. There is a clear need for improved adult competency in the basic skills of reading, writing, computation, communication, and interpersonal skills as a foundation for the specific vocational training in the work place. Reports are that another 23 million Americans are unable to perform their jobs adequately because they lack these same communication skills.

The work place expects certain basic skills of entry level employees and they are essential for those who move ahead. Corporations and labor and education and government share the responsibility for seeing that those communication skills are developed along with the technical skills.

I would like to suggest 11 factors that we must address--some of them mentioned in the comments by Mr. Walker--if we are to have that kind of effective program.

We need to create, first and foremost, a more favorable attitude and climate for vocational education in this society. Efforts must be made to create it because it will not occur on its own. More than 20 reports recently addressed the status of American education. Some of those reports neglected to stress the importance of vocational education, and others indicate it has little or no major value.

As Mr. Walker and Mr. Miller pointed out, we must be concerned about the overall problem of education today but, as both speakers said, we dare not follow the pattern of the British in undermining or eliminating technical and vocational education.

Second, we must address the changing nature of employee competencies in the job market of the future. I spoke of the "information society" earlier. The economic future of our country depends on brains, not brawn, as Congressman Paul Simon pointed out recently in a conference we sponsored on this subject. The point is that many of the jobs of today and tomorrow did not exist yesterday and we don't have adequate educational programs to equip people for them in the numbers that will be demanded.

Three, because of the nature of jobs in the information society, we must build specific job-related skills on a sound basis of communication skills and equip the student to change and grow with the job. That means that we can't be too prescriptive in the programs that we develop. We dare not lock outselves into patterns that focus narrowly on skills which cannot change as the future changes.

Fourth the job market demands that we cooperate with each other as never before. Education, business, and government must find new and creative ways to work together, and I cite one example of that need. In a report by the Center for Public Resources, there is a major discrepancy between current perceptions of how well trained people are by employers and by educators. The educators feel their graduates are well trained for the job market. The employers disagree. The gap in understanding must be narrowed.

Fifth and then I will summarize because my five minutes are up, we must address local concerns, where they exist, but we dare not go overboard in addressing local concerns and neglect some basic national skills that are needed in smaller quantity, which no local program will gear-up to provide.

And, finally, we must recognize that in this evironment, we need federal support; but business is acutely aware of the situation and will do its part. Business has a vested interest in its solution and is actively working. While Federal initiatives are necessary, business wants to be listened to and must be listened to, and business is ready to cooperate.

We can cooperate at several points, in defining the needs, in retraining the trainers, and in implementing the programs that are developed.

MR. FELLENDORF: Thank you, Ed, and I appreciate the fact that we only got through five of the 11 points, but there will be opportunities to add the others. Our next speaker is Jack Griffith.

MR. GRIFFITH: Thank you. First let me describe a little bit about my position in this. I am a small, independent businessman in Stillwater, Oklahoma. I also serve as president of our national association. I'm in the wholesale gasoline business. We have, through necessity, been changed into a company that now has nothing but convenience stores and gasoline stations together, gasoline outlets, I should say.

As president of our national association, made up of 12,400 member companies, about two-thirds of my time this year will be spent coming to Washington, representing our association in problems that we have or legislation or other things, with governmental agencies, regulatory agencies, and Congress itself.

I often go home and say, I'd give this business to my son, but I love him too much. We are absolutely stiffled--and I mean that truely--by governmental interference in our business. I always maintained I would never have a partner in business. I have one.

Lask week I was here and I spoke before a committee on the effect of paperwork on the small businessman. I have some figures I want to throw out quickly so that some of you who are not in the private sector can understand some of the things that we have to deal with and that I feel can be apropos to this subject.

In 1982, our company, a very small company, had to file with different governmental agencies, either Federal, State, county, or city, 487 different forms. We have a young man in our firm who is a CPA and he's a stickler for keeping time studies and all that. He figures that we spend 308 hours doing nothing but figuring out forms and giving reports back to different agencies of government. That's 308 hours because we are computerized in our office. If we had not been computerized, he estimates it would have taken 614 hours to do that same work.

He is extremely conservative in his estimates. He feels that it cost us, as a company, last year, $11,200 just to fill out governmental forms. That's not counting supplies, postage, or anything else.

The reason I bring this to your attention is, I feel if we had that money back in our company to train new employees or to raise the wage scale of our present employees, it would be money much better spent than on filling out forms.

As an example, for one bureau in the Federal government, we fill out seven forms. In the seven forms that go to that one agency, there's only two lines different in all seven. So this repetition of what we are required to do as small businessmen is ridiculous and, as I said, that would be money so well spent if we could put it into training and things of that nature.

Now, I realize that's a little off your subject, but all of you have input with different people in this city and if you would carry that message we would appreciate it, because it is extremely difficult.

In the business I am in, the training sector is one that is not touched. We have basically minimum wage employers, because we are hiring clerks and people like that. The biggest shock that I get are the number of people that we try to hire who are poorly prepared--somewhere in their training--that they can't even really make change. That may sound ridiculous to you people in training, and it is surprising. We've even had college students who are not capable of making change. They just--I don't know what the problem is.

Somewhere that we could have a training program for the clerk level of people, the people who do minimum wage-type work or above. As soon as we get one that's good at that level, we move him right on it, because he is--he or she--is so hard to find.

So I think that's one of the very strong needs in our business, and it's not unique with us. We've talked to a lot of people who find that we have to have some kind of a training program, we need a training program for that class of employee. We cannot put all of our training to the very high level technical training. Let's train some of the minimum wage, every day, clerk-type people.

Thank you very much.

MR. FELLENDORF: Thank you. Ed Hardman?

MR. HARDMAN: You know, when you are the last speaking, you can always say, those who come before me made my speech for me and then you can shut up, but I won't do that.

The one thing that I want to do is sound a very hearty amen to everything that has been said by the panel thus far. I am going to speak and give you an industry point of view that represents my industry, and I have a feeling that a great deal of American manufacturing and American industry probably support, would support most of the things that I am going to say. I am going to have to say them fast.

First of all, I think we see the federal government's role and the trend that has started under the Reagan administration as perhaps the beginning of the proper way to do things. By that I mean, government's role has to be a very limited one in the lives and affairs of the American people, and particularly in the way they are trained for jobs and take jobs.

We believe the government's role should be something like this. The government should put some of our tax money into state and local scenes for education, and of course a great share of that dollar should go for vocational education for the simple reason that every time that kind of money creates an employed person we are creating a national asset. We are also creating a local asset.

Therefore we feel that the States and communities, the counties and States, should share equally in the cost of education. They should also, because it happens on the local scene, have a much stronger role in saying what is going to happen and how it is going to be done.

Now, let me just--because of the extreme shortness of time, I am going to have to shortcut everything I wanted to say to you--let me just lay something on you for a minute that is very, very specific and it gives you something to chew on when you go away from here.

First of all, we think that in the age of computers there should be a total job inventory that should be part of local, county, city, and State government, that every community should have a perpetual job inventory. If we are going to train or do any kind of educating or training, we ought to know what the opportunities are for those people to gain employment. We should know that at all times. Therefore we say, there should be always a perpetual governmentally--government at those levels--operated job inventory.

We also say that there are only two entities that get involved in vocational education or should get involved. One is the employer and the other is the educator. Therefore, we'd like to suggest that advisory councils should become--and there should be advisory councils at every level of government--and they should be quasi-legal entities with a great deal of authority.

We have traditionally dumped about half the high school population in the street every year with nowhere to go--vocational education notwithstanding. We feel that we can do much better than this through a cooperative effort, and if we are going to have a cooperative effort it has to be voluntary certainly, but also it must have some force of law behind some of the things that happen.

Therefore, we say, an advisory committee, or an education-employment council, whatever title it might be given, but give it some authority. Let's not waste the resources of the vocational schools. Let's use them wisely. Let's train in proportion. Let's recruit, test, recruit and train, within the school system, proportionally to the jobs that are available.

Now, we see that as the local role, and we see employers playing a very, very heavy role in that situation.

Going back up to the national level, we see the Federal Government being a supplier of at least 50 percent of the funds, but its role in regulating should almost disappear; it should almost disappear from the public scene.

The proper role of the Federal Government, as we see it, should be to identify areas of national need and national problems, areas of national concern. The Federal government should be monitoring the work force in all of the skills and technical and semi-technical areas, to make sure, from a matter of economic and military security, that we do not have any great gaps in any of the skilled trades or any of the technical areas of know-how.

This is the kind of thing we see for the Federal Government--identify those kind of problems, and publicize them to the local areas. If the 50 states have control, that means there are 50 different units of government competing to do a better job in reaching the goals that have been identified. If we multiple that by the number of counties, cities, and local communities, it becomes thousands and thousands of competing units that can constantly refine and improve in a cooperative way--with only two entities involved, remember, the employers and the educators--to constantly improve the role of vocational education.

One more thing quickly. We must find a way to devote funds to the proper payment of teachers and, we must find a way to devote funds to the proper, constant re-education of teachers and guidance counselors. Vocational teachers must in some way have a constant opportunity to update their know-how, their skills, to get a good look and some experience with new technology.

This has to happen or the vocational system will fall back where it was 20 years ago. We have improved, you know, in the last 20 years. All the acts haven't been sins. There have been many, many laudatory things that have been happening.

I guess I'll finish by saying, the industry that I represent believes in vocational education, believes in its role, and believes that its final product should be a prepared person, prepared up to a certain level, prepared to a certain level of competency so he or she is employable at least at the lowest level and allow the student--or the employee at that point--and the employer to take the education and training from there.

Thank you.

MR. FELLENDORF: Well, Bob, now we hear from you in response to all of these interesting comments.

MR. WORTHINGTON: Thanks, George. I'm sorry, Mr. Walker, I was not able to hear all of the remarks, but let me just speak briefly on the role, as I see it, of the Federal government.

We see the Federal government as very much a junior partner in vocational and adult education. I think if we look back historically we find that in 1971 the Federal government was producing only 17 percent of the revenues for vocational education; 83 percent was State and local.

In 1982, 92 percent of the funds are State and local; 8 percent are Federal. So we definitely see the Federal government as a junior partner, but a very important partner.

Ed, you referred to occupational information. We think the National Occupational Information Coordinating Committee and the State Occupational Information Coordinating Committees, NOICC and SOICC as they are known, are moving toward what you called for. Thirty-seven of the states now have a career information system and we think all the states will fairly shortly adopt such systems.

We are quite excited about some of the things The National Center for Research in Vocational Education is doing in not only identifying needs but developing policies and looking at secondary education problems.

We think that The Curriculum Coordination Centers that are funded by the federal government are making an impact on vocational education curriculum; and we have evidence that they saved some $4 million of state and local money in the last year by avoiding duplication of instructional materials.

I recently testified before the Senate Appropriations Committee on our budget proposal for 1985. Our request represents and increase over last year's proposal of $238.5 million, for a total of $738.5 million. But this will still only represent about nine percent of the total national expenditure for vocational education.

When we consider the total vocational education delivery system that's out there, with some 19,000 institutions, 17 million students, we must recognized that it is a massive system, and its strength, I think, is in its diversity. We hope that we can avoid federal legislation that will limit the diversity of the vocational education system.

We believe in the preamble of the 1963 Act which says that vocational education should serve persons of all ages in all communities. We do have special emphasis in our legislative proposal for special populations. We've asked for a 10 percent set-aside for the handicapped and a 20 percent set-aside for the disadvantaged. If the 10 percent set-aside were to be enacted, with the budget proposal that we presented this morning, it would represent an 8.3 percent increase in the funds for the handicapped. We are presently serving about 40 percent of handicapped students at the secondary level and we recognize we need to serve more.

Our budget proposal, coupled with the legislative proposal, would increase funds for the disadvantaged by 1.4 percent, which is not a great deal, but at least it is a commitment.

We are in agreement with what several of the presenters have said about the private sector. We are doing a survey presently of the advisory committees that serve local vocational education programs. Dr. Charles Buzzell, who is coordinating that effort for me, tells me that he has evidence there are some $40,000 vocational instructional programs (VIP) advisory committees at the local level providing free consulting service to communities across the Nation.

We are hoping that this summer, late in the summer, we can, with the help of the states, identify one representative of an outstanding local advisory committee in each state which we will invite to Washington for National recognition this October and also to get from them information on how they see that the private sector can further contribute.

One of the major roles we see, under Secretary Bell's leadership, is promoting excellence in education; and as you know, we have established a Secretary's Award for Excellence in Vocational Education.

If you look at the programs that receive those awards, you'd be amazed at the diversity and high quality of vocational education programs being carried out in this Nation. For example, Wisconsin won a national award for a program in laser technology, one of 28 programs in the Nation. Florida won a Secretary's Award for an outstanding program in culinary arts. Missouri won a Secretary's Award for a program in office automation. Vocational education is very, very diverse.

We met recently with representatives of the telecommunications industry. We are working with them to establish, hopefully, a national network of telecommunications among vocational technical programs.

So we do see a leadership role. We do not see the Federal Government stepping out of vocational education at all. The President has never said that. In his original efforts to reorganize the Department of Education into a foundation, as such, he never said we do not need federal leadership in vocational education or education in general. That particular initiative has been put on the back burner and probably will not surface again for some time. But we do see a very important role as a junior partner, for the Federal Government, and we are very pleased to play that role in vocational and adult education, George.

MR. FELLENDORF: Thank you. The balance of our time until we break for lunch is to be spent in interchange between Mr. Walker and the presenters, between the presenters and each other, and to invite comments from the audience. I'd like to begin and ask if Mr. Walker has any observations he'd like to make on any of the comments that have been made here and then we'll see if they have any quizzes for you.

MR. WORTHINGTON: One thing that I hoped Ed Hardman might refer to is a program of--a special project at the National Center on skilled work force shortage in the precision metals industry, which we are quite excited about. We hope it will be a model for the identification of what persons in various technical fields need to know and to be able to do. Bob Taylor, I hope will have something to say about that.

MR. HARDMAN: I think that's a great example of what I was talking about when I talked about the federal role in identifying problems. I think that's a great example of it.

MR. FELLENDORF: I would like to ask Bob if he had any comments to make about the paperwork that Jack referred to.

MR. WORTHINGTON: Well, yes. I should have pointed out that a fellow Texan by the name of George Bush has been chairing a Presidential task force on reducing regulations and paperwork and has done an outstanding job, eliminating thousands and thousands of pages of regulations.

Now, we hope that the new federal legislation for vocational and adult education will have a minimum of prescription and a minimum of administrative burden assigned to the states. We believe the present legislation--and we also believe the House bill that is presently being discussed--has too many prescriptive requirements in it. We'd like to see some of this prescription eliminated; but I think this administration has made a major effort to eliminate paperwork and to eliminate unnecessary regulation and I think we have accomplished a lot in that regard.

MR. FELLENDORF: Someone in the audience? Would you like to step to the microphone and identify yourself, please?

MR. DIDSBURY: My name is Didsbury, Professor Didsbury, and I am going to take the role of kind of a devil's advocate. Just very, very quickly I'd like to give a speech. About 12 years ago, I had a conference, "Careers and the Future," a two-day conference. This was 12 years ago, and I am experiencing deja vu. Exactly everything that we are discussing was discussed then.

A few things we're confronted with no one seems to want to talk about, first of all, we are stuck with a society in which we are rapidly creating the desire to have all chiefs and no indians. We are running out of indians.

Secondly, when everyone talks about education--education, the establishment, is exactly like a bowl of jello. You shake it, you shake it, and nothing changes. We in the field of education, do we have specialized education or training, or do we have general education? The business community, if you're in a small company, you want someone who is special trained. If it is a large corporation, you want the generalist. What do we do in the field of education?

Another thing which I think someone should say--no one thus far has said it--everybody keeps talking about the need for more education in the information society which we are creating. Just about everybody in this hall has a fabulous job, a stimulting one. Of the 20 growing fields that are going to produce the greatest number of jobs from 1980 to 1990, 14 of them require only a high school education. The growth fields are secretaries, nurses aides, janitors, sales clerks, cashiers--need I go on? Only five of the 20 require a college education, require more education. Give people in the 14 other jobs more education and they will not take the jobs. They are unhappy; they will not do good work.

So, if I may say so, I hope as this conference proceeds, we come to the real world. I'm not a business man, but I know perfectly well that in one sense if you give people too much education you have an unhappy worker, particularly if he or she has no way of utilizing the talent. There ends the reading of the day.

MR. FELLENDORF: Does anyone want to comment to that?

MR HARDMAN: I would just like to say to the gentlemen, in my notes, I have planned to say something about the proliferation of chiefs and the shortage of indians and I am glad you said it for me.

MR. GRIFFITH: Well, I think I commented that the minimum wage person needs training in our field, and I think that's the group you are talking about, is it not?

MR. WORTHINGTON: I think that's a strong argument for the continuation and expansion and improvement of secondary-level vocational education; because we recognize that most of the young people now in school, the work force of tomorrow, are not going on to a four-year college degree. They'll need vocational education at the secondary level and probably one or two years beyond the high school. But we also want to keep in mind that we are living in a learning society and everybody had better be motivated for life-long learning.

MR. HARDMAN: I think we better recognize a thing that has been a bother to us for so long; we ran out of jobs for limited people, strong back, routine jobs. All of a sudden, the largest number of new job opportunities falls, almost cycled back, into those categories, and we finally have a place to put these people. I think that education should be thinking about that. It's not really education, it is a matter of training and we were in quite a deal of despair for many years. Where would we put all of the people of limited ability? All of a sudden we are finding plenty of job openings for them.

(From the audience)

MR. DOLAN: I am Professor Gene Dolan from the University of the District of Columbia, right here in the District. I am Chairman of the Department of Computer Information and System Science in the College of Business. One of the things that I am concerned about--we are in very close relationship with the District of Columbia Public Schools--is teachers to teach the teachers.

You gentlemen in business are stealing my people because I can't pay them enough. This I think is a problem that all of you, and the government as well, have to address. The educational market place cannot economically compete with business in a short-supply field. The latest figures, I believe indicate we are some 200,000 people short, competent people short, in the field of computers.

The other thing which I have in mind is that you people don't know who you are asking to employ. If you need an accountant, do you get somebody who is a major in mathematics? No, you get somebody who is an accountant. Here in the field of computers, when you want someone to design a new information system for you, you go out and hire a computer scientist who doesn't design information systems; he designs computers.

You don't know who you want in the field of computers. I have the problem of trying to teach people to meet your requirements; yet, you keep going to the school of engineering for the people that you want, and they aren't coming out of the schools of engineering.

MR. FELLENDORF: Anyone like to respond to that observation?

MR. WORTHINGTON: Well, it certainly points up an important role for vocational and technical education in the computer age. I think what West Virginia just recently announced, a state-wide program of microcomputers for all vocational education students with the help of a $600,000 Appalachian Regional Commission grant, is one step forword.

I think Forest City, Iowa is another place we should note. We should look at this rural area where the entire community of 4,200 is to become computer literate with a program sponsored primarily by industry over the next two years. I think we have a lot of good examples around the country of computer literacy and computer training, and vocational education more and more is making important contributions to that.

MR. FELLENDORF: The issue of competition between the educational establishment and industry for people to do the jobs, which this gentleman referred to, seems to me to be a very basic problem. I had the opportunity last year to visit in the German Democratic Republic, which is of course East Germany, on the other side of the Berlin Wall, and those societies have solved these problems very well. Everyone works for the government, so the government decides who is going to teach and how much, and who is going to work in the factory and they adjust it appropriately.

I think there were some observations made from this platform today that called for a greater degee of planning, if you will. That gives one some thought as we talk about what we need or think we need and the price we may have to pay to achieve what we need. That may or may not be a price that the American public is willing to pay.

DR. GRAHAM: I'd like to comment at two points on the questions of the business community taking the most competent teachers from the education community. I think that is a problem, but it is not one without some resolution and I think that resolution can come at two points. One, just because the most competent teacher leaves the classroom does not mean that person is no longer available to the education community to assist in training the trainers.

Challenge the business community to share their new employees. Those teachers will have a better understanding of what skills are needed and how to teach them based on experience in both education and business.

I think this is a marvelous opportunity for the education system to work in collaboration with the business community to utilize just those people in training of the trainers.

The second comment is that we should provide some incentive for business to become involved in this way. It can be done either through their involvement in advisory councils where they help to identify current or emerging job needs and the employees who can work with educators in the training programs. In addition, business can be given tax incentives or other business incentives to encourage them to prove financial resources or competent leadership training from people who have the experience and the up-to-date knowledge of the business community needs.

So, I think what is called for is not a condemnation by either side but greater collaboration in addressing a common need. The former teacher can be an excellent facilitator in the process.

MR. FELLENDORF: Yes, whoever wants to speak, please come down to the microphone.

MR. VARKEN: Paul Varken. (Uncertain of spelling. This individual did not register for the conference.) I'm with the World Future Society, and I would agree with their University of District of Columbia prospective though I'd probably say it in a slightly different way. The Harvard MBAs and accountants have been using their computers, I think abusing them, with very short-term cost-benefits considerations--maximizing payoff for the next quarter, really failing to look at strategic and very long-term considerations about our mutual benefits, our mutual growth. I see some signs that that may be changing.

Like Howard Didsbury, I'd like to go back around ten years and say a personal thing from my own point of view. A fellow named Peters--don't know where he is now--but he was with the Office of Management and Budget, and he asked me to review the emerging volume of standard occupational codes. I saw a need to take into account changing industry occupations mixes and the emergence of small business ownership. Ten years ago that kind of thing was foreseeable and it is indeed happening today as a source of new employment.

Peters told me an analogy that applies whether you are a political conservative or a political liberal, whether you are looking toward vocational education or general education. It's like a spinning top, spinning through time, and it wobbles. I don't mean to offend both camps, but what he was telling me was that as the emphasis shifts over to liberal or conservative or to vocational and then back to general, it gives an opportunity to clean out some of the drudge, if you will, or the sludge, or the kind of things that would hold back our spinning top of planet earth as we go into the future.

I'm most impressed--I'm going to ask a question--what are the implications for government roles of the Naisbitt kind of thinking about shifts from farm-to-factory, factory-to-information society, what's beyond that? There is another way of saying that. Our shared cultural values, as they change from the character ethic--work hard--that went with the farm and then into the factory society, work hard, control nature then the personality ethic--sell, sell, sell, as we needed to consume what was coming out of our factories--you might think of Dale Carnegie and Willie Lomzx. Now what I hear being identified is a self-realization ethic that emerged during the 1970s. Work smart, express your own uniqueness, select your discretionary services, like exercise classes that you want to go to, and how to stay healthy. A point of view that anti-manipulative, don't exploit me. That's even global, as I see it.

My question is, what is the next ethic likely to be? How is it likely to impact on government roles and on preparation for productivity in American industry. There's one thing that I see as a possibility, a teamwork ethic where we'll gain even more satisfaction then we do now out of being very skilled participants on the team; developing your own uniqueness, but also promoting the team. I'd be interested to hear an evaluation of that in any kind of imaginative look at the very long-range future, the 1990s and beyond, as to where we seem to be headed and what it implies for government roles and vocational education.

MR. FELLENDORF: Would you like to comment on that, future's role, the next ethic that's on its way?

MR. WALKER: Not really. I would prefer to look at a trend which the futurists argue is toward devolution and decentralization, and this being the wave of the future. Any obvious assessment of what's really going on right now indicates that there are strong forces for centralization continuing.

I need not stress the fundamental problems that we confront when we look outward and the growing need for more of us to look outward. When we do this we do it from a national vantage point--if an official policy is involved.

The sectors of our economy which haven't recovered very well all relate one way or another to our export situation and these significant sectors of our economy have to look to Washington to resolve their problems since it is an international issue.

I'd like to pose one fundamental question. We've heard the endless drumbeat of change and adaptation and vast future changes. Why is it the national Government does its domestic business pretty much as it did 50 years ago? We have not changed one bit in a half-century as to how--I'm not arguing the issue of what area we move into at the national level--I'm saying how the national Government seeks to provide a resolution of whatever domestic issue emerges.

We still have the long and lengthy shadow over all of us of Franklin Roosevelt. How the Federal Government operates is relfected very, clearly in the the bureaucracy growth from 1946 until now, 2.3 to 2.7 plus million civil governmental employees. That's the Federal Government; less than half-a-million growth from 1946 until now. And then you look at the State and local sector, full-time employees, 3.4 to almost 13 million.

The Federal Government doesn't do much of anything domestically, directly. We've only had two programs where the relationship between the Federal Government and the citizenry, domestically speaking now, have expanded between 1940 and now. One is Medicare as an amendment to the Social Security Act of 1935 and the other is the Supplemental Security Program--the only program in your lifetime and mine where a heretofore intergovernmental program was nationalized.

Those were the only two program areas where you have had an expansion between Federal administrators and the citizenry. All the rest are expansions or extensions or expansions of roles that were there in 1940.

To put it differently, the Federal Government relies upon second-, third-, fourth-, and fifth-party providers for everything it does domestically. It doesn't do much on its own. All folks in this system, liberals, conservatives, almost in a silent consensus adhere to the same position on this, growing out of the political situation of the 1930. Keep the Federal bureacracy small, and for goodness sake, don't do the job yourself. Do it with others--even when politically you sometimes distrust those others intensely--and this gives rise to what I would argue is an untenable situation administratively in many instances.

One of the issue of centralization-decentralization, what answer has this actual sitution provided to all of the descriptions of the past and the future. In a very real sense, we've been decentralized through the period when we ostensibly were centralized--since the federal government, did not do much expect raise money and regulate and try to handle the writing of checks to certain jurisdictions and people. In direct service terms, almost all it did was run a park service and the post office. Other than these and IRS, it relies on all those folks down there, all those second-, third-, and fourth-party providers.

Now that is an element of standpattism. That is preminent conservatism. There has been no change here regardless of administration. This was true in the heyday of the heights of liberalism in the 1960s and it is true now. I assume it is going to be true forevermore, as some would say--resting on a consensus between all manner of factions in this country and where we are still loyal, all of us, to Jefferson.

This is one chunk of the past which I think is prologue. I don't think it addresses the issue of centralization-decentralization in any sense very head-on. It is a mixture of the two and I think is one of the fundamental problems confronting the country today, as it has in the past and the future. So in all this I'm a bit skeptical about some of the futurists' forecasts.

MR. FELLENDORF: Any comments? Yes, sir?

MR. PENROD: I'm Walter Penrod from Indiana State Advisory Council on Vocational Education. I'd like to address this to Dr. Walker. In talking about trends, it appears to me that we see a trend in education in which the development of human resources--I see education as being the development of our human resouce--falling into a system of two education levels. One level seems to spend a great deal of our efforts, resources, and manpower on a small group, somewhere between 15 and 20 percent, who complete a four-year college degree, somewhere less than 30 percent of the high school graduates who go on to a four-year education. The other level is being separated into another system which may be devoted to that body of students who do not pursue the higher academic level. If this trend is carried out into the future, it could separate our educational system to a two-track system, somewhat similar to others.

I'd like for you to comment on what the Federal role is on equality and equal access both in manpower and resources to ensure the development of the whole resource. In our State we have more students dropping out of high school before they complete high school than we have graduating from college, and yet until they get academically disadvantaged they seem to have very little access and very little of the human resources devoted to them.

MR. WALKER: That's a tough question. It also, I think, goes almost to the heart of the matter. Looking at the past, it is quite clear that--in the regulations and the battle going on in terms of the renewal of vocational education, and the amendments started back in 1976 putting vocational education on a very different path and course from what it had been heretofore--it is hard for national Government, and particularly the Congress, to restrain from playing the role of PTA. They like this role.

It is frequently a bad PTA meeting, however. Follow the floor debates sometime if you can stand it; get the Congressional Record and go through, this year, or previous years--and out of that is very little attempt to recognize the two basic points you made, that there are, in fact, a very small proportion of our youngsters headed for what might be called elitist, well-paid, managerial, high tech jobs, and the greater portion is still given an egalitarian--I would argue, nonsensically egalitarian--rhetroic.

Talk in this area, and the overtones in terms of adjectives used are almost all increasingly more egalitarian, even as in the marketplace we have an increasingly competitive condition prevailing. In some respect this is a tradition which began with the election of 1800--but the propensity over the last 15 years to stress not the equality of opportunity theme but a rigid, legally imposed variety of equality, which seems to me to be a system, very different from what was initially conceived of or sought. The major changes made legally and desirably in the mid 1960s were necessary, but where status confers all sorts of privileges and where the law adheres to that and where very few people are able to confront the issue politically or before the courts--this raises tough questions.

This country does not really understand the difference between equality and liberty, philosophically. We have always merged the two. Any European understands explicitly the difference; we tend to fuse the two. Perhaps we got by with it because in effect we did identify equality in terms of equal treatment before the law and equality of opportunity in the racial context.

I think we are finally facing up to the implications of the essentially ideological conflict between these two great values which are twin themes of our political tradition. But it's only in the past 15 years when you've had to confront head on the fundamental contradiction that arises when these distinctions are ignored. The educational community, to some degree, is more victimized by this confusion in values than any other sector, expect for the political.

MR. FELLENDORF: I'd like to frame a question to Ed Hardman. I always have the uneasy feeling that some of the things that we are talking about have been at least approached and partially solved by people in other countries. I'm always interested in whether or not there is any model or semi-model in any other Western European country that have faced some of the issues we have been discussing today. Do we have anything to learn from West Germany, for example, or any other countries, or do you feel that they are as confused or more confused than we are?

MR. HARDMAN: I can only comment in the area of skills training, vocational training for skilled area, highly skilled areas. In the 1960s and 1970s, we heard the same complaints from our counterparts over there as we had. First of all, young people were not terribly interested in the trades; secondly in recruiting, they were getting the bottom of the barrel into their skilled trades. We haven't heard that recently. Things seem to have improved.

In the German system, of course, even today there is a certain amount of regimentation. It isn't quickly recognized as that, but it is. People are directed more into opportunity areas than they are here.

What I tried to describe a little while ago, was a system which would not limit anybody, as far as their freedom of choice is concerned. What I was describing really was adding a little more direction to those who at the high school level and doing a great deal more in real, close counseling and testing. I think that in several of the European countries--West Germany, and England--seem to be very well satisfied at this time in the metal working trades in the way that education is being handled. Other than that, the rest of them complain of the same problems we have.

MR. FELLENDORF: Could I ask the question, in the counseling that apparently is being affected, is that being done by people who have trained in universities as counselors or is it being done by people from industry or at least partially from industry?

MR. HARDMAN: I think that the answer is university-trained counselors but trained in a different matter. As well as their academic training, getting tremendous amounts of industrial experience and know-how on a firsthand basis.

MR. FELLENDORF: Are there any other last-minute questions?

DR. GRAHAM: I'd like to comment on the kitchen scene if I might. I agree that it illustrates the situation where we are today with cooks from many sectors in the kitchen trying to make the stew; but there is a positive element in Mr. Walker's scene that we should not overlook.

We are quick to point out the danger that we will permit that kind of confusion to continue and we know that too many cooks spoil the stew. The second danger we fear is that some superchef from the Federal level might come in, drive the others out, and attempt to prepare the meal for us. The positive element becomes clearer when we ask, why are there so many cooks in the kitchen? The answer is that each of those cooks is vitally interested in the product. In fact, the survival of an effective vocational education system depends upon someone hearing each of the their interests, their needs, and using the perspective and expertise that they bring to the process.

The challenge is to capitalize on that positive commitment and willingness to be involved expressed by each of the cooks in the kitchen. I think you will hear more at this conference about the opportunity for that kind of interdisciplinary communication and cooperation through advisory panels; or coalitions in identifying needs, assigning roles, coordinating programs and allocating funds in vocational education in the future.

MR. FELLENDORF: Thank you. Yes, sir?

MR. BUSHNELL: I'm Dave Bushnell, George Mason University. One of the earlier commentators spoke of the number of jobs opening up in this decade or the next decade for less-than-college-educated persons. While I would agree with that statistic, I also am concerned that many of those same people will be seeking training for new jobs or retraining for emerging occupations.

My question, I think Bob Worthington can probably handle it, what are we doing with regard to adult continued education? I realize that private industry is playing a major role. A recent U.S. Consensus study has shown that private industy probably is the biggest trainer these days. However, for the smaller business and people who want to upgrade their own skills and qualify for new and emerging jobs, they need access. Bob, what's happening with expenditures for adult vocational education?

MR. WORTHINGTON: Well, of the 17 million students I referred to in round figures enrolled in vocational education last year, 2 million were in post-secondary associate degree programs, 5 million were adults, and the great majority of those adults were retraining or upgrading their skills.

Our legislative proposal, which is on the Hill, does have a special emphasis on the retraining of adults, particularly of displaced workers. I understand also that the Higher Education Act is being revised; that the National Advisory Council for Continuing Eduction is giving a great deal of thought to adult retraining as well.

Of course, as you know, the Jobs Partnership Training Act has a special fund of some $135, $140 million, round figures, for that. So, it is a very very important area, Dave. I'm glad to comment on it.

(RECESS FOR LUNCH)

AFTERNOON SESSION

MARCH 15, 1984

MR. FELLENDORF: I'll call the meeting to order.

This session that will be lead by Vernon Broussard--Professor Broussard--is on social and demographic trends and changes during the remainder of this century.

Dr. Broussard served six years in the California State Department of Education where he specialized in program development. He wrote the legislation for the reform of California's education from early childhood through the 12th grade. He was chairman at the Third World Congress of Comparative Education Societies, which examined the restructuring of society. Dr. Broussard will introduce his panelists and his presenter. I will turn the meeting over to him.

MR. BROUSSARD: Thank you very much, Dr. Fellendorf. I am also a member of the National Advisory Council on Vocational Education. We are going to try to move through the introductions fairly rapidly to give more time for the speaker and for our distinguished group of panelists.

Panel members are, in alphabetical order, Ralph Dosher, Jr. He is currently Corporate Education Manager of Texas Instruments, Inc. He was instrumental in the development of the first industrial products of Texas Instruments and in developing advanced corporate planning and the decision package concept and planning that guided Texas Instruments in its early, long-term and strategic planning.

Our next panelist, seated to his right, is Ms. Sybil Kyi, from Hawaii. She is the Executive Secretary, State Commission on Manpower and Full Employment, and State Advisory Council on Vocational Education. She studied for her doctorate at the University of California at Los Angeles, UCLA.

The next person is Dr. Matthew Puleo, Vice President of Human Resources Group, Yankelovich, Skelly, and White, Inc., which is a broad research and consultant firm. He has a wide range of experiences in management, organization and the behavioral fields, and I am sure for those of you who are familiar with the literature in demographics, will have often times seen his name. I should also note that he has completed his MA and PhD in Personnel-Organizational Psychology at Columbia University.

Our last distinguished panel member, not the least, is Dr. Robert Taylor. Dr. Taylor is a person I'm sure that is familiar to you all. He has been Executive Director of the National

Center for Research in Vocational Education from March 1965 to present. The National Center provides a great deal of research and information not only to the operational field in vocational education but the National Advisory Council and certainly, as I was telling him, to myself. I won't go through all of his resume in that regard. Welcome, Dr. Taylor.

Our speaker and the format we are going to follow will be essentially the same format that we followed this morning. We are going to try to increase your opportunity for questions, interaction, and to try to focus more on the issues, and I know that the directions we received this morning from Chairman Miller.

I think our speaker is certainly a person who is eminently qualified in this area. She is first and foremost an economist. She has taught at American University a variety of courses related to labor and business. Her primary job title is Director of Corporate Planning, but her primary job is really to keep her eyes and ears open for Edison Electric Institute, for the association of electric companies, to ensure that whatever is occuring out there does not adversely affect the member electric companies.

Without any further comment, please welcome Mrs. Sue Lerner.

LERNER: Hello, I'm very relieved that the applause comes at the beginning because then, you know, you get that. One of the great things about being here today aside from a much appreciated opportunity to visit with you, and I hope that your questions will mean that this will be a visit, is I haven't been here since the kids left to go to college and if you have missed the aquarium downstairs, go back, because it is really worth seeing.

I work for the Edison Electric Institute which is the association for the investor-owned electric utility industry, the people who send you the bill once a month. Our membership comprises 99 percent of private power in the country--that is, power that is purchased from private companies--and serves 99 percent of such customers. To give you some framework, that means about 77 percent of all of the power that is purchased in the country.

You can ask yourself, why then should we be interested in questions related to vocational education. The answer is, we have about 78 million customers and by the year 2000 we'll probably have about 110 million customers and they all have to pay their bills. If they are not suitably employed, there will be other solutions, some of them political, some of them doing disportionate damage to other types of customers.

Also, we sell electricity, which is really the use of appliances, of different kinds of appliances, their use and their maintenance. We are very interested in an adequate supply of workers who can both produce that kind of equipment and maintain it. We have, kind of by approximation, an extended interest in the activities that you people are intimately involved with.

Now, one of my major activities, as you were told, at the Institute, is keep my eyes and ears open for stuff that is coming down the pike. In connection with that, I am very, very concerned with demographic and social changes. As a matter of fact, I understand there is somebody here from the Future's Society and about 8 months ago, I published Dave Snyder's paper, Demographic, Economic and Social Trends That Will Shape the Organizational Operating Enviornment During the 1980s. If any of you are interested in having this paper I will be happy to send it to you.

Now, let me get back to the question of demographic and social changes. What do traditional demographics tell us? But, first of all, I have to say to you that to have confidence in traditional demograhics, you have to have confidence in the findings of the Bureau of the Census and, if you have been reading the professional publications and the general press since the inception of the 1980 census, you will know that there are serious questions raised about the validity of some of the findings in the census.

As a matter of fact, while the census was under way, there was a Saturday Night Live skit which used a Hispanic family as its medium, and there was communication as to what you should respond to and how you should respond when the census taker comes and they talked about how your responses would impact transfer payments, Social Security, job opportunity, et cetera, et cetera. If the responses that were suggested on Saturday Night Live were any indication, then a terrible skewing of the data would ensue.

As a nonhumorous and actual incidence, we participated with the Department of the Census in testing questions that related to households. The question was, what is your average utility bill, and we tested in in 55 cities. The overwhelming majority answer--you know that's a sneaky way of saying it because they don't have the absolute statistic--but the overwhelming majority answer was so far out of line with respect to the actuality which we were able to check, that it was quite evident that the question could not be addressed within the census framework. There were a couple of corollary things that it told us; it told us something important. It told us people's perceptions of what their electric bills were which is very important.

It also sort of made us worry a little bit about the validity of some other questions that perhaps hit sensitivities in the reponse. All this to caution you in absolute reliance on census data for projecting certain kinds of needs.

The traditional census approach tells us that we have an aging population; that there is a decrease in the size, the percentage size of the population at the entry job level; that we have smaller households, fewer children per family; that there is a marked and continuing increase in single heads of households; that there is an increase in poverty level population and an increase in upper income population.

There have been numerous articles in the last eight months on the pulling apart of the middle class, the increase in the poverty level, the increase to a lesser extent in the wealthy level and this void, this growing void. There has been a pro and con argument on this. The Myth of the Middle Class is one of such articles.

If you look at each of these standard declarations with respect to demographics, you say, there is an aging population. What does that mean? What does that mean in terms of jobs? Does it mean that since everybody says Social Security is running dry that there are going to be more people working for a longer time, who will have to receive training that will suit them for jobs that are available to them with their characteristics; their physical characteristics, their educational characteristics, et cetera, et cetera?

Will there be more people in the labor force who come with a work orientation background so that you find older people in second or third work activities that compete with entry level people? Will you be confronted by that kind of thing? The social orientation of the employer and his psychological orientation which says, "this individual has worked before, has a record of showing up, et cetera, et cetera, and if this individual is employed, he will not be drawing, or she will not be drawing Social Security?"

Or there may be a political response which extends the Social Security receiving age to, say, 65--62 wiped out--or further up the line. What will that do to the vocational training requirements from that point of view?

Then we say, there is a decrease in the population at the job entry level; but coming around the other corner is the vanishing of entry level jobs. I used to say that when kids got out of high school the girls could always go into sales or be typists and the boys could always work in construction or drive--do something that related to driving, to get their entry into the job market--or work at a gas station.

The gas station jobs are rapidly vanishing as we self-serve our cars. The other entry level jobs are rapidly vanishing. I saw the other day a voice-activated typewriter. So you ask yourself, what kinds of jobs are people going to be getting?

What that really means, when you think about the other aspects of this, like the continuing strong participation of women in the labor force as an added thing, what this really means is, what we need is an inventory of job opportunities.

This inventory has to be developed almost in a blue sky way, of job opportunities down the pike, training within the present educational framework. With my limited access to it and able to observe, and certainly with my own experience it is true, training is very much like the flu shots people take every year which innoculate them against last year's flu, and leave them very open to infection for this year's flu.

All these young people who are spending their money to become computer operators, to become word processors, who have been fed the line that technology is going to save us and that the technological jobs are going to be in place, are spending their money and pinning their hopes on getting jobs in these fields.

Anybody that works in these areas on the technology side, and give you the timeframe for development knows the jobs won't be there. The executive will be able to speak into this typewriter and get finished copy in the not too distant future.

What, as a result of all of these threats, is happening within the job market, particularly at entry level? I treat entry level perhaps because I am not as experienced in the area of vocational training as one might be, jobs are becoming desexed. They are becoming unisexed jobs.

Not terribly long ago, almost every typist was a woman. When they changed the name to word processing, changing the frame of reference in which you look at this occupation, at any given time there can be an equal number of men and women doing word processing.

If you look at the services that are provided in offices, the people who used to come to fix the photocopy machine were invariably men. The IBM typewriter people were invariably men. The people who delivered the United Parcel Services packages were invariably men. The people who installed the telephones were invariably men and today they can be men or women. That reflects a number of things--social changes, that are giving "the equality of the sexes"--and it also reflects a perception of job scarcity, so that there is a willingness to enter jobs.

I think practically everyone sitting in this room can remember the day when there were no men telephone operators and today there is an equal chance that you will get a male operator. Of course, when telephones started out there were only male operators and then it became a women's job exclusively and now it is changing again. This reflects a scarcity of opportunity in the job market.

Another publication that I put out was called "Industrial Policy, Yes or No?" Now, industrial policy is an effort to respond to the political and social threats of job instability, and as a result relates very closely to plans for vocational education. To anyone who is involved in this in a bureaucratic way, I would suggest, if you are at state level, that your governor's office be very closely keyed-in to what is happening on the federal policy level with respect to industrial policy.

It may fly, it may not fly. If Mr. Reagan is not elected, it may very well fly because--it is a democratic standard bearer kind of idea--if Mr. Reagan is elected it may fly because there may be a sufficient amount of instability so that a political response is required. This is really in the nature of a political response and holds opportunities and dangers in almost equal amount.

The great talk is that the technological revolution is going to save us. Everytime I pick up a paper by a guru with a considerable amount of prominence I see such a statement--John Naisbitt, who wrote "Megatrends," which has been on the best-seller list for God knows how long, takes the position that technology is going to save us. But, it is not quite clear, that technology is going to save us, because when you take a very careful look at the kinds of jobs which the new technology provide, there is a very high incidence of requirement for extremely high skill, skills that are not easily acquired without a considerable amount of time and money input.

Then, when you already have all of that time and money input and you get your certification in whatever it is, it is not clear that that job will be there at all because technology is moving so rapidly, that it is overcoming the needs for certain kinds of skills.

I remember the first time I saw the Standard Eastern Area Computer; it was called the SEAC. It was at the Bureau of Standards, and it was in 1950. I took up a room, well, it took up two rooms about the size of this whole area down here. When my son went to the University, all the work that could be done by that computer could be done in a hand-held calculator, and by the time he got out of college and went to graduate school, the price of that particular piece of equipment was roughly one-tenth of what it had cost when he started his training.

By extension, apply back to other technological developments and the impact on labor. When I raise the robocics question with some futurists that I know, Eric Weiss of the Sun Company, he always says to me, don't get agonized, Sue, it's going to take two people to repair every computer. It is going to take two people to repair every robot. So if you are displacing one worker with a robot, it's going to take two people to keep that robot in repair, so you are actually expanding the labor force. But that certainly is not clear.

The argument about employment opportunity is very active now and a very important paper, that I also published, is called "Eight Scenarios for Work in the Future," the different kinds of scenarios, if you are looking into the future, through which you can address work.

It is not clear to anyone precisely what will happen because of the extreme social changes and the volatility of the society as it responds to changes in technology and also the difficulties that arise in political response to social and economic problems.

Let me just read briefly to you, these eight scenarios--more technology, less work. Scenario one, extreme Tailorism in which scientific management takes over and there is a short week; scenario two, in which you have controlled distribution of less work to union members exclusively; scenario three, underground work, even greater segments of the work force operating outside the formal economy; scenario four, work coupons, rationed work coupons to assure fair distribution of limited work opportunities.

Then there is another group of scenarios which are called more technology and more work. Scenario five, what we called gods and clods, an extremely busy elite of professionals and a useless majority of workers, much work but few qualified to do the work; scenario six, shadow work, activity that does not contribute to substance but is a necessary complement to the production of goods and services in an industrial society; scenario seven, the electronic cottage, technology is pervasive and available to all with plenty of work for homeworkers.

The third group is, working with less technology. Scenario eight, subsistence work, a lowered demand because people aren't going to have the money to buy products because they won't have work, which is the perception here. This lowered demand reduces the importance of productivity.

So, the whole question is up for grabs at this point. Let's look at the question of how one defines work. There are two things I want to address, one is, how do you define work, and one, who pays for the work that gets done. Because these things are implicit in describing the jobs that will be available in the future, because if nobody wants to pay for a job that has to get done, there won't be a demand for that kind of work and training for that kind of work is not a valuable input.

I was at a meeting of Black State legislators about two weeks ago. One of these people, who is very highly placed in his own state legislature, addressed the audience as follows. He said, "I am between a rock and a hard place. We are going to have a massive water clean-up program in my state. It comes under the jurisdiction of my committee; the budget comes through me; I have an opportunity to assign x-hundred jobs out of the total package. I would like to assign those jobs to minority applicants and I can't find anybody, anybody, to fill that job. Latin American countries would have to create an average of 4 million new jobs annually until 2025 to accommodate its growth. The U.S., with an economy five times larger, averages 2 million new jobs a year."

The flow of immigrants from the third world has already begun. In 1979, the nine leading source countries for legal immigration were Mexico, the Phillipines, Korea, China and Taiwan, Vietnam, India, Jamaica, the Dominican Republic, and Cuba. It is difficult to feel at ease about the impact of the new arrivals, difficult to guess whether the cultural fabric will stretch as it has before or finally be torn and what Fallows is really talking about is competition for a limited number of jobs.

Now, concomitant with this kind of thing, you know, people who come in, who are not trained, are looking for entry jobs and there will be problems. I can give you examples in the area of migrant labor.

The Israelis have developed a tomato that ripens on the vine but does not fall off. It just sits there 'til somebody comes along and picks it. As a result, it can be picked by machine. These seeds are rapidly becoming available and by extension you can see that if a gene can be altered in a tomato to not fall off the vine, and be picked by machine, it can be altered in other harvested crops as well, crops that are now harvested by human labor, hand labor. This is very rapidly taking place.

On the other side, ask yourself, what happens if it becomes a political expediency to legalize illegal immigrants? Then you have a large body that requires the services, the benefits, and can contribute to the society. What are the plans for adapting, rapidly adapting, a large group of people with limited training to American society. Are people thinking--I'm sure people must be thinking about that. What are the costs; what are the opportunities; who is going to pay; how can who pays be made palatable, so that this in fact takes place.

Just to keep you--one bit more--I have one more thing to say with respect to something I do. I was reading stuff and came across a piece which said that middle management is the most sorely at-risk group in the educated population in industry. The projection is that about one-third of middle management will become structurally unemployed. Now, what are you talking about when you say middle management? You are talking about people who are educated, who understand the bureaucracy because most of them deal with the bureaucracy in the course of their work, who have invested at least four years and a lot of money in getting a background, which is suddenly not useful.

Now, on the other side you have structurally unemployed--we no longer call them blue-collar workers, according to the census--but you know what I mean, let's say blue-collar workers, who traditionally in our society have not become political activists. Sociologically and philosphically blue-collar workers are populists rather than activists; don't like to deal with the bureaucracy; have a very strong philosophical feeling that if they are not working it's their own fault, that there is something wrong with them.

Traditionally, blue-collar workers and people in the middle management group don't have terribly much in common. In the last several years, we have seen the growth of single-issue activism in this country--it is prevalent--where people who wouldn't spit on the best part of one another, or greet each other, come together for a single purpose, for one issue, and when that is accomplished, they go away from each other. You can't count on them to do a lot of things together; they will stick together for this one issue.

Here you have an issue held in common, structural unemployment, disappearing jobs. You have an educated, vocal group in middle management that understands the political community, how to work in the bureaucracy, and you have the potential support of what we described as the blue-collar group on this single issue. The political implications, the sociological implications of that kind of an amalgam are staggering.

I talk to an awful lot of people, and listen. I spent most of my time listening and remembering; and it doesn't seem to me that many, many people are thinking about this. Now, in the course of my work and this is the last thing I'll say, I do things in microcosm. I go around being Cassandra and people wish I'd go away and die in the corner and stop bothering them, and telling them that all of these terrible things are going to happen. I always have the feeling, when I walk into a room, they are going to say, there she comes again, let's leave; because I am always sort of the bringer of bad news because there are a lot of things that people have to pay attention to. I want to warn them there's an open manhole cover so they don't fall in and drown or break a leg or something.

I recognize that the skills that middle management has are enterpreneurial skills. They most closely ally themselves to entrepreneurial skills. They are literate; they can do arithmetic; they are job-dedicated, beyond the seven-hour day or the eight-hour day, because they are upwardly mobile, they have a concept of upward mobility, and a strong sense of self.

Those are characteristics which are entrepreneurial and the evidence is plain that displaced middle management people go very strongly into entrepreneurial activities. I say, let's look at entrepreneurial activities, and it turns out that small business is very fragile and very vulnerable and there is a 75 percent failure rate annually. If they are going to fail, they are not going to pay their electric bills. So I really have an intestinal interest.

So, I have underway now, with the full approval of the senior vice president to whom I report, a pulling together of the data to develop informational materials for new entrepreneurs or people who are contemplating being entrepreneurs. The intention is to have these available through our member companies. For instance when somebody comes in and opens an account and says, I am opening a new business--by that point they've moved out of their cellar and they've started employing people--the customer relations person in a company could say, "Look you know we have a lot of stuff here that you may be interested in, how to keep books, how to do inventory, how to hook into a small computer, et cetera.

One more thing. There's an article in the New York Times, February 13, 1984, which says "Parks Department Hard-Pressed to Replace its Craftsman." That's very interesting; I'm sure its not only in New York. It is probably across the country and the whole area of the restoration of housing, and there's stuff now about manufacturing moving back to rural communities, away from center city, so all of that housing which has been abandoned will be available. Tremendous number, tremendous number of job opportunities out there, but somebody has to figure out what they are and not treat this year's flu with last year's vaccine.

Thank you very much.

MR. BROUSSARD: Thank you very much, Sue, you gave us a great deal to think about. We will go right into the panel discussions and will start with our first panel member, Mr. Ralph Dosher, for his reactions.

MR. DOSHER: I'd like to address two of the key issues that were brought up; one is the decline in the supply of entry level people, and the other, the social or infrastructure changes. I'm going to speak primarily of these with relation to high tech industries and in particular large company, high tech industries since that is what I represent.

In the first place, the decline in the supply of workers for entry level is not new to high tech industries. We've been having this problem in the growth areas for some time. In Texas, in the San Francisco Bay area, there has been a perennial shortage of entry level workers. The way we have solved that problem is to go off to the Midwest and to the East to try to find the workers to fill those jobs.

For example, in Texas, in T.I., we get about 80 percent of our technicians from outside of the state simply because we don't produce enough in the state.

Now, the problem is going to get worse before it gets better, apart from the pure demographics aspects. The demographics is affecting the professional people such as, engineers, computer scientists, and so forth. So many of those jobs now are being filled by non-professional jobs; so we have the paraprofessionals. Technicians are doing many jobs that engineers were doing just a few years ago. For example, we don't hire graduated computer scientists anymore to do computer programming. We hire software technicians that can do coding. We don't need a four-year graduate. That is putting more demand on these qualified technicians and graduates from the vocational schools.

Now, the problem of supply is more due to other factors, at least in our industry, than it is pure demographics. It is a problem of mix. If things were about like they were twenty years ago, we probably wouldn't have as much of a problem, where the number of graduates in the soft sciences (psychology, sociology, etc.) and graduates in the hard sciences were about equal. Today about four times as many are going into the soft sciences. We can solve our problem in the high tech industry because our demand for vocational graduates is relatively small compared with the demand in nontechnical industries. We could solve our problems simply by shifting graduates to hard sciences just a few percent. If we could get a few people going into technology versus going into sales or any of the other soft areas, then our problems would be solved and we think that that will probably happen.

It was pointed out the importance of redesigning the work and I think that is exactly right. In fact, we already see it happening in certain areas. Many of our jobs are going to either end of the work spectrum. They are becoming more low tech or becoming more high tech. Just a few years ago, we would have a computer service tech that would have to repair the computer right on the site; whereas now many of these people are low tech people. All they have to do is know enough to push a certain button on the keyboard, and the computer analyzes itself, tells you which board to pull out. He just pulls out one board and puts in another.

His main skills are how to deal with the customer, not the high tech skills. We are now hiring many people with basically low tech skills, if you will, for those type jobs. On the other hand, we have the demand for the very high tech people, which Sue has pointed out, going where you have to do the repair, or you have to work in the process, or you have to design a computer system.

These people will require, and do require, considerably more training. They have to have multiple skills. For example, a lot of the schools are talking about training robot technicians. There's really no such thing as a robot technician. What you have is a person who has to know some software; he has to know some computer design; he has to know some mechanical design; he has to know a number of skills.

This is also true in many of the high tech process industries. For example, in semi-conductor manufacturing, you have to have a variety of skills. None of the community colleges, non of the technical schools, teach any of these skills. For example, vacuum technology, you can't find a school that teaches vacuum technology. That is a very important technology for technicians these days. They also need to know some software; they need some computer design and so forth.

I have two recommendations relative to this, one for big business and one for small business. First, I think that big business industry must be more aggressive in helping the postsecondary schools, working with postsecondary schools; help the postsecondary schools recruit students. If those postsecondary schools can't bring the students in to develop the technicians, then industry will probably do it themselves.

We have had several programs in Texas where we have worked, we think, very effectively with the school system, with the community college system, in developing recruiting programs for the community college. We funded a program, we provided the expertise for developing it, and we go out into the high schools--we, industry--go out to high schools to recruit for the community college. I think that's been a very effective program. It is a model that can be used in other parts of the country.

Second, the secondary schools must be more aggressive in establishing industry co-op programs. The reason we don't have more people in the postsecondary schools is because they learn in the fourth and fifth grade that technology is bad; it's hard and so forth. I think secondary schools have to be more aggressive in establishing industry co-op programs so that students, those early-age students, understand what industry is all about and what the world at work is about. So, if they do, the students will develop a desire, primarily through taking math and science courses, to go into technology.

In the small business area, they probably are going to have more difficulty in recruiting. Whereas large industry will provide a lot of its own training, small business training is where the postsecondary schools may find their primary role. Most of the technicians we hire don't come from our local community colleges. One reason is that they don't produce enough, but the second is, they don't meet our needs exactly. However, I think they can serve small businesses very well.

Because of infrustructure and social change, schools will have to provide more flexible and individualized training, but there are still a lot of old jurisdictional rules and traditions that are limiting this need. In terms of where you provide training there can be no constraints, whether you go into industry to train, where you go across certain geographical boundaries and so fourth to train. This causes considerable problems in getting cooperation from the schools in training in high tech programs.

Now, it wasn't talked about much here, but there was some talk this morning in terms of lifelong training and education. I think this is going to take on more emphasis. This has always been true in the high tech industry simply because the technology has been changing so rapidly. If you came into industry five or six years ago, you are already outdated. In most colleges, curriculum turns over about every 15 years. So if you have been out of school 15 years, whether you're a technician or an engineer, you are going to have problems. There has to be a continuing education or lifelong education culture developed.

I believe that is about the total of my contribution.

MR. BROUSSARD: Thank you very much, Mr. Dosher. At this time, I'd like to just remind the panel to limit your remarks and reactions to about five minutes, if you would please. We've had our fifth guest to arrive, Mr. Gene Bottoms, the Executive Director for the American Vocational Education Association.

Our next reactor, just to remind you again, is Miss Sybil Kyi.

MS. KYI: From the most western and most southern state in the union, I bring you greetings of "Aloha." I would like to point out to you that this year Hawaii celebrates its silver jubilee anniversary of statehood with a population of little over a million, an unemployment rate of around 6 percent, and 48,500 students enrolled in almost 100 vocational education programs.

Some of you may agree with me that, although Washington, D.C., is the historical and official capital of this country, the heartland of the United States lies westward. Today's trend setters are native to the West and the South is burgeoning with new industries and new migrants. Changes in population can be chronicled, but there are also changes and differences in values occuring in society.

Institutionalized education, vocational education included, favors the majority culture's value system which has its purpose for mainstreaming America. For those immigrants whose ethnic derived values are similar to the majority culture, Europeans and some Asians, acculturation becomes more rapid than for those others, including the native-born Indian, the Eskimo and the Hawaiian, whose cultural values may be different.

In many ways, American education has traditionally practiced a kind of insularity in its views and in its knowledge of the rest of the world. If we seek to upgrade science and mathematics, shouldn't history and social studies be revised to include an understanding of basic economics, geopolitics, and the international economy, at the high school level? The countries and islands of the Pacific promise to be the economic basin of the future. Are we prepared to deal with these countries and cultures?

We know that all of the people who will be in the Nation's work force by the years 2000 are living today. We should know their characteristics, all except those who have yet to come to this country. All we really know about these groups and others like them is that they will continue to come from all the troubled spots in the world, seeking a better life, or seeking refuge, simply because no one else wants them.

We've heard that there may be future shortages in the labor force because of the decline of youngsters in the population up until the age of 14 at today's marking. Happily this age category includes both my younger daughters. This means that we must learn to utilize the human resources of all the available population, including older workers, women, the disadvantaged, the differently abled and the alienated.

While there seems to be some agreement that older workers will be a dominant force in the labor market in the next 16 years, there is disagreement as to whether the extent of worker shortages will be sufficient to persuade or even attract these older workers to remain in the work force.

There are countervailing forces in terms of existing policies of mandatory retirement in private and public pension plans as the desire of many nearing retirement age to exercise their option for leisure and perhaps consider part-time or even voluntary employment. This baby boom generation will move into the 35-to-54 middle-year group, swelling that segment significantly by 1995 and they will compete for employment as the upper end of the career ladder, exerting still another pressure upon older workers to leave the work force.

In 1980, half of all married women were in the work force. This contributed to the 44,500,000 women who were counted in this national labor force, an increase of 46 percent from the previous decade's marker. The highest labor force participation among women were in the states of Nevada, Alaska, and Hawaii--all of them around 60 percent.

Most of the single heads of households in the United States are women and one-third of these are in the poverty group, even though most of them work. Why? Because most of the women are in clerical, retail, and service jobs that seem to have a preponderance of lower-paying and limited upward mobility positions.

What about the demographics of the disadvantaged, the economically poor, those with physical and mental handicaps, whom I prefer to call the differently abled, or those who have transgressed the law and might be viewed as a trapped resource? The limitations of the differently abled are not their handicaps so much as the educational institution's willingness to adapt curriculum and instruction for their learning and the work institution's willingness to adapt the work site for their earning.

The capability of modern medicine to save and repair lives does not unfortunately ensure a quality of life to follow. Promotion of access to employment opportunities for the differently abled can be done through employer example, through modeling, through high visibility and dedication to details. Too much idle time and too few program offerings in occupational skill training are usually the realitites for many juvenile and adult offenders. Considerations for security are understandably paramount and resources for developing on-site training facilities are scarce. The technology is here for delivering alternative services of remote classroom and instruction.

The best intended employment and training programs are to no avail, however, unless correction systems ensure that policies for conditional release and probation take into account the inmate's successful pursuance of educational and training objectives.

The response of vocational education to impending social and demographic changes and the needs they present must and should be delivered within the context of comprehensive education. The current wave of returning to excellence means to many a return to the basics and shaking off all those subjects that have over the years crowded the high school curriculum. Unfortunately, academic administrators at the university level seem to be pointing at public secondary schools saying, it's time you gave us better prepared students so that we can do our job and go further. Time doesn't permit me to give you a recent example that I have right in my home state but if you want to know about it, I'll share it with you if you remind me.

In recent years, we have noted more university graduates are being recycled in our education system, going back to school to take vocational courses to enable them to get a job. The point really is, all students need a better foundation for learning, whether it be in preparation for a university education, postsecondary vocational education and skill training, or earning a living after high school.

State advisory councils on vocational education are in a highly visible and credible position to influence and assist the modernization and responsiveness of vocational education and employment training programs to these social and demographic changes. We find our advisory role to be also an advocacy role, promoting vocational education to the community at large.

Unfortunately, there is still a prevailing attitude of vocational education for someone else's children or for those of lesser abilities. It's time we promoted the vocationally gifted and talented. We have helped organize forums for rethinking the roles of secondary and postsecondary education within the context of total education. Why not give vocational exploration and experiences to all young students, even the college-bound.

We have been promoting vocational counseling and guidance, particularly as a necessary stimulus and support for the nontraditional vocational education enrollment. We have been thinking in a lifelong learning mode and moving beyond simply entry level skill training to upgrading and retraining needs.

One of the most successful postsecondary education programs in Hawaii provides contracted services on an open entry, open exit, year-round delivery of competency-based short-term courses geared to specified needs.

We are strengthening and renewing our ties with the business industry community and with citizen advisory and professional groups. Vocational education has always been a grassroots movement.

Education and employment training agencies should stimulate public discussion through local program advisory committees. The

SACVES can and should assist in promoting decentralized partnerships in every local community, serving as conveners and advisors and representing and helping these local advisory committees which really represent the closest linkages between education institutions and the communities they serve.

We have organized leadership in regional settings, sharing our knowledge, a sense of what works and what doesn't, and finding our strength through diversity and group actions. We are encompassing in our efforts attention to work styles and the management of human resources.

Finally, we believe that comprehensive planning should take place between and among vocational education and employment and training programs and it must take place at the state and local level. In Hawaii, we are calling it a comprehensive employment plan. Responsiveness to change, sensitivity to people's needs, a strong sense of state and local direction, partnership and creativity, these are the stances we need to develop and practice to answer to these social demographic changes ahead of us.

I thank you.

MR. BROUSSARD: Thank you very much for those comments. Next, we'll go directly to Dr. Taylor.

DR. TAYLOR: Thank you. I enjoyed very much Sue Lerner's presentation. I found it authoritative and well-reasoned. Her remarks address many of the major points in regard to the social and demographic trends and changes during the remainder of this century.

One issue that Ms. Lerner did not raise and that we might want to consider as it relates to these trends, is that they are not uniform and homogeneous across the country. There are, for example, differential birth rates of various racial groups, that vary by geographical locations. In certain states we are witnessing a kind of youth crecent based on higher birth rates across the Southwest and Southern states that need to be addressed with certain state policies that, in fact, may be at variance with the related federal policy.

We also need to consider vocational education flexibility and responsiveness, to capacitate both the individual to perform and advance in careers with the labor market and also our institutions as they formulate their policies and programs and determine the ways in which they will be implemented.

One of the things that I thought was particularly interesting and worthwhile was Ms. Lerner's admonition to reconceptualize our view of work and our need to be able to manipulate the demand side of the equation as well as the supply side. I would add to that thought that we need to adopt a new mentality of the way we view education. While we have given much lip-service to the whole area of life-long education, we have yet to really practically incorporate that philosophy into our programs. We need to be concerned about the articulation of various levels and competing elements of the educational enterprise, like public vocational education, JTPA or apprenticeship, postsecondary colleges and other four year institutions delivery systems. This becomes very important not only as we examine the cost-efficiency of our education and training system, but also the criticality of trying to develop logical and well coordinated paths for self-directed learners so that they can wind their way through these various systems, and make intelligent career choices.

In terms of the comments, I guess I go back to the line in the Rubaiyat by Omar Khayyam where he laments the difficulty of grasping this scheme of things entire.

As we consider the precis of federal and state legislation that implement various policies in competing domains, the need becomes apparent for those of us in the vocational education field and in the human resource field to think far more broadly and to be actively concerned and involved in the area of job creation and maintenance. A very serious concern that we need to address is whether or not we are going to be able to create enough jobs in the future, and what that may mean in terms of quality of work life policies, industrial policy, technology transfer, trade regulations, small business development, and other things of that nature.

There is a need to more aggressively plan and to identity contingency planning that could take the form of such options as job rotation, job sharing, shorter work weeks, the need for job redesign, and other options to enhance the quality of the work life.

We need to continually be thinking about training and jobs for all of our citizens, not just a technological elite, and clearly not only in terms of social goals but also in regard to economic goals. We have to find ways to capacitate and make effective performing economic participants and citizens out of the full range of our various populations.

MR. BROUSSARD: Thank you very much for those comments. We'll go to Dr. Matthew Puleo.

MR. PULEO: Sue, I really enjoyed your comments and looking at my notes and I feel somewhat like the proverbial mosquito in the nudist colony, I'm not quite sure where I should start. Maybe, I don't know if you are like me, but I get out of lunch and I feel a little restless and want to do something active, so maybe I can either comment directly or challenge some of the things that were said to create some controversy.

I think one of the most important points that we brought up was that regarding demographics when you talked about how much validity there is in the information. You talked about making an inventory and being able to plan for the future. This may sound somewhat facetious, but one of the problems in looking at trends is that it is very difficult to make predictions. It is particularly difficult to predict tomorrow and the future after that.

We are very good at looking back and seeing what happened in retrospect; but it is almost impossible, particularly when you look at social data, to predict what people are going to do tomorrow.

The problem is that social trends are not linear in nature. It is not like making a cash flow projection or looking at some sort of economic forecast. It really works on a principle of a dialectic, meaning that the changes in society are stimuli in themselves for other changes, and there really is no way for us to accurately predict where society is going to go tomorrow.

The only thing that we really are positive about today is that change is with us forever, and in fact, change and knowing that we will always have change, is the only thing that we can count on, which goes back to Bob's comments about flexibility. That is probably going to be the component for success in the future, not only in terms of education, but in the ability to respond to the business challenges of tomorrow.

You mentioned the middle class and it is interesting. I also believe that the middle class is disappearing and, unfortunately, I think we are going in the direction of a landed gentry where those that have had status and opportunity and material possessions in the past, are going to be the ones that will retain it. I'd also like to suggest that the middle class in our society was an artifact, an artifact of the economic agenda that resulted at the end of World War II.

America had a very unique position at the end of World War II. We had a time when we had tremendous opportunity. We came out of the world with a whole set of technologies and optimism which allowed us to create an economy which was really a manifestation of our own fantasies. It was a very unique period of time where we could create the world we wanted.

I think one of the problems we face today as Americans is that we have to finally come back to reality, as David Walker talked about this morning. We can't have everything we want. We just can't put our minds to things and create the society we'd like. We are sort of part of the world today and we as Americans are going to suffer from the same pressures and ills that the rest of the international economy has to deal with.

Another important point was what you said about aging. I think we underestimate the impact of aging, the fact that we can live longer, has upon our educational system and our economy. Someone once said to me that marriage is a permanent solution to a temporary problem. Now, if you think of living to a 140--I mean, I really love my wife, but I'm not sure what another hundred years with her is going to do. The same thing occurs when you think in terms of employment. If you go back seven years ago, if someone had four jobs in three years, you would say that they weren't stable. Today, if they've had one job for seven years, you say they have no initiative.

If we are looking at a lifespan of over 100 years, and we all know that development does not end at the age of 21, we do develop as people into our adulthood, what is the impact that that has in terms of multiple careers--maybe three, five or six careers that people will have in the future.

I'd also like to suggest a ninth scenario. That is what I call urban guerrilla warfare. During the great prosperity of the 1960s and the 1970s, we came up with this nonsense maximum business--people that did sensitivity training and human relations training--and we had the win-win approach. Remember Likert and some of the other people that came out with this, this was win-win. Well, I'd like to go back to the old anthropological tetralogy and say that sometimes when there is a winner there is a loser.

That will come back to us as our economy does not expand and competition changes from getting a piece of a larger pie to getting more of a pie that is stagnant. What is that going to mean in terms of people's willingness to be so thoughtful and so generous, and in fact our data suggests that racism and regionalization and ethnicity are increasing in this country. We are becoming much more tolerant of pluralism as long as those people don't live in our neighborhoods or work in our company.

I think, in summary, maybe there are a couple of things, a couple of points, we can consider. First of all, it's going back to basics. What is the basic meaning of education in America? If I think of vocational education, and I do have a background in this--I was trained as a rehabilitation psychologist at one point and did a lot of work in designing the developmental disabilities program in this country, working on the technical advisory council. If I go back to the time, the 1950s, when I was going to school, I thought of education as going ahead and getting a college degree; and a college degree meant that I was going to have the ticket to a middle class existence. The people who weren't so smart were the people that went into trades.

I think that was a fundamental error that we made in society. I think that the distinction between vocational and technical and all types of education and liberal arts education is really artificial. It was something that was made to fit a certain assumption about where our economy would go.

Does anyone really think today that having a degree is going to be what gets them a good life? It's not true, and if you see the work we do with younger people, I don't know why they go to community colleges and get graduate degrees, et cetera, because as we talked about having to recycle people, that is all too true.

We have to begin to look at what education is and what it means to be trained. If we think in terms of what I said earlier about an economy in a society where it is difficult to project where the future is, maybe we have to move away from training people in specifics and train people in generics.

You talked about technology, one of the problems of bringing technology into the work place is that as a society, while we are quite verbal, we are not very literate. To deal with technology, particularly computers, it means that we have to understand both logic and syntax and we don't know how to do those very basic skills.

We are doing a project now with a client, headed I think with someone on the panel, where they are looking at retraining older workers to deal with high tech servicing and utilizing high tech equipment. It was very interesting, we found, that there is in fact no difference between younger and older workers in their ability to learn.

The only difference is that you have to teach, have to take the courses and teach them on a modular basis and configure the courses around what the people's needs are, in opposition to the old method of teaching them to work a particular brand of equipment. For example, instead of teaching somebody to fix IBM equipment, you teach people how to fix microprocessors.

In summary, I think if you look at what the future is for vocational education and education in general in this country, I think the underlying principle would be to take a look at where education in general fits into our society.

MR. BROUSSARD: Thank you very much for those remarks. They were indeed provocative, and I'm sure going to provoke some questions from the audience.

We will go to our last panelist Dr. Bottoms, Gene Bottoms, the Executive Director for the American Vocational Association.

MR. BOTTOMS: Let me just make four or five points in terms of the speech and consequences that one might see.

If jobs are changing as rapidly as indicated because of the application of new and improved technology, this has implications for vocational education for it suggests that we should stress the historical roots of the field, that is we should strengthen the "E" in vocational education. Early vocational education leaders gave greater emphasis to the "E" than we do today. Less emphasis on training at the secondary and postsecondary level, and more emphasis on the historical meaning of vocational education that connects the academic knowledge to the practices of an occupational field so that one can begin to understand the foundation scientific and technical knowledge that underlines practices. The results would be vocational education graduates with a capacity to continue to learn, and adjust, and adapt.

As the Europeans know, this can't be done in two hours a day in two years. We are going to have to begin to think about the last two years of high school and two years beyond high school, in some of the more technical fields in cooperation with employers.

The second consequence from the speaker's remarks is that we have overcrowding of people for entry jobs. That means we have to have both state and national policies that give emphasis on moving people beyond entry jobs. If you look at our national policies, they tend to focus on getting people into an entry job, they do not focus on moving people beyond the entry level. If we don't develop some folks' capacity to move beyond the entry job status, then new opportunities in entry jobs for new workers won't open up.

Since our policies are geared to get people to entry jobs, we have a shortage according to the speaker, of folks who can do things well in advance level technical and skilled jobs. These jobs are difficult to fill--and it is understandable because we haven't been encouraged to gear vocational education or training systems necessarily to get at that.

Third, one of the points the speaker made is that there will be a scarcity of public resources to do all of the things that we need to do in the area of vocational education and training, and that we will need to expand partnership efforts with the private sector. I think that means for vocational and technical education, particularly for the specialized institutions, community colleges, the vocational technical schools, increased partnership efforts with the private sector, as many of them already have begun, in order to obtain a part of the needed resources. That means a more systematic effort on part of vocational education in the future in obtaining resources from the private sector.

Fourth, the speaker said there is no shortage of work in America, just a shortage of jobs. David Birch at MIT makes a point that we create about nine small businesses in America to every one in Europe. That's one of the reasons we've continued to grow in the number of jobs we have in this country. So, it seems to me that this has implications for vocationl and technical education.

The folks who create the small businesses are folks who've got some know-how, something to sell. We should continue to plant the idea of self-employment with secondary and postsecondary vocational education students.

At last, I thought the speaker was saying that there is not a shortage of jobs in America, but a shortage of good jobs. That means we have to continually expand our ability to help people develop so that they have a better shot, not only at the entry jobs, but eventually to the good jobs, and that means the capacity to change, grow, and learn once one gets into employment.

The last point I would raise, we have a policy trend in this country in which we continue to separate the population into more and smaller target groups so that resources can be concentrated on them so they might become advantaged. I wonder if we haven't over done this and in fact aren't beginning to resegregate population along new dimensions and that this removal from mainstream programs denies them the very opportunities they are seeking to acquire.

Thank you.

MR. BROUSSARD: Thank you very much, Dr. Bottoms. Before we take our break, I want to give Sue an opportunity to, just a few minutes, to respond to some of the specific comments of the panelists.

MS. LERNER: Just very quickly, with respect to business's need for employees in their particular category of need, instead of looking in terms of social responsibility in which the business in effect is giving charity by developing programs in their area look at it like a business cost, a business investment cost; and the tax structure can accomodate for that. I don't know what the Texas Instruments' situation is, but in community "X," for instance, if there are 100 workers that with some training could be employed to do a particular job and 100 workers 500 miles away can do the job without training, look at your life-cycle costing, calculate the differential and see if there isn't some way to use the people who are indigenous to your work area.

A few of the things that Matthew said--I want to say something to irritate the living daylights out you--you're so young and you're so pessimistic, I'm so old and I'm so enthusiastic about the potential, you know. In economics there are two conflicting theories; one is the expanding fund theory and the other one is the fix fund theory. The fixed fund theory says, if you get more, I get less. The expanding fund theory says if you get more, I get more; that means if I work and make money that I can buy things that you make and then you can buy things that I make, et cetera.

All of these people we have been describing as terrible liabilities are also consumers. They are contributors. Everybody eats; everybody wears clothing; everybody does this and that the other thing; so there are all of these other opportunities.

I come from an industry where it takes as much as 12 to 13 years to put a plant on line, so you have to make, with some degree of informed confidence, a judgment about where you are going to be in ten years and what the demands are. So, I would suggest a little more confidence in the opportunity.

Also, middle class is a psychological and political mind-set. It is not actually where you are. In the 1930s, I was very poor, but I never felt poor. It never occured to me that I was one of those poor folk. I just didn't have that mind-set.

I think that the American mind-set is not dissimilar. It is changing a little bit now; we now have the first generation in which young people don't assume they're going to do better than their parents, in some categories of activity. But in some tangential way George Bernard Shaw addressed this one when he left all of his money to a foundation that would develop a phonetic alphabet so that the British would lose their regional accents; and he assumed that it would make it a classless society and everybody would have better opportunities. That's not exactly a joke. There's a lot of meat in that particular kind of attitude.

I would say to you, you love your wife, but you're not so sure about 140 years. I would say to you, she loves you, but she's not too sure either.

MR. BROUSSARD: Thank you very much, Sue, for those remarks. We'll take a break now, and if you can return at, let's say 3:25.

(Short Recess)

MR. BROUSSARD: I think that we have enough that have returned. Maybe as we start our question and answer period, the rest will wander in.

Ralph gave me some very specific instructions--that's Dr. Bregman--gave me some very specific instructions with regard to making sure that I stayed out of the fray and just kind of directed the traffic, so to speak. So I won't have a lot to say.

I will have to say this and that is, that in terms of the panel, I would hope that they would open up a little bit more. Matthew, I know, has a lot more say, and I know that Dr. Taylor certainly does, Gene Bottoms, Sybil has a great deal more to contribute. I've got the feeling, and so does Sue, that we were just kind of being nice, for some reason. Maybe it's this rarified atmosphere here in Washington, or it may very well be that I'm from California, which is that crazy state that is at the cutting edge of change; are there some other states that, at least some of the futurists agree, that are also on the cutting edge of change.

When I hear some of the statements, it is very, very difficult--Ralph and the rest of you--for me to hold back. I'll get my five minutes tomorrow, is that right? I'll have my five minutes tomorrow.

In any case, I'd like to start off with the audience because you were specially selected and invited here because of the contribution that you could make not just to the National Advisory Council on Vocational Education that's just an entity, but to the millions of children and adults and others who are served by vocational education. You can assist us in terms of hopefully influencing some policy directions before the whole thing, the whole thing meaning the whole system, simply falls apart.

I know that that's probably more provocative than anything that has been said, but I certainly have that feeling now, that unless there are some substantive changes within the society, in this society, one can easily see, I think, that we will indeed fall apart. If you don't believe that, you can travel to Italy, try West Germany, or if you think things are going well, try Japan, et cetera. You will see all the symptoms, if you are an observer at all.

Maybe you'll want to talk to me about why I'm saying those things. In any case--and I'm going to stop, Ralph, believe me--I was sharing with one person as I was leaving yesterday from Los Angeles, one of the reporters was interviewing the chief of police of Palo Alto. That's up in northern California--specifically in the Silicon Valley.

This is the high tech area; professionals who are highly trained, highly skilled people. He has been trying for several years now to stem the tide, the high use of cocaine among professionals. He had gone to the city council and discussed the matter with them a number of times and had gone to the management. The reporter asked him what the result was and he told him that simply nothing could be done about the use of cocaine in Silicon Valley, the widespread use, like daily use of cocaine by these professionals, because the management was also using cocaine.

That's just one example. I could go on with regard to the second highest killer of teenagers in the State of California--suicide, among the minorities, among blacks, it's homocide. I can give you a lot of other statistics in that regard. That indicates alienation; that indicates isolation, in Marin County, as an example, the divorce rate is 100 percent; so Matthew, you don't have to worry about 140 years, it is already occuring in Marin County, and this was seven or eight years ago. I'm giving you a statistic that's dated.

So we see it occuring in California. While there are these kinds of changes, they certainly are not uniform. California has a tendency because I think the people who come to California are seeking change--that's one of the factors that are involved--and so they are more receptive to change. But these kinds of changes are occuring in American's "heartland." I think that my colleagues of the universities of the Northeast haven't gotten out of those ivory towers to go down to Iowa or to Nebraska to find out that essentially what is occuring in Stockton, California or Palo Alto, or Culver City is indeed occuring in Sioux City, Iowa.

In any case, hopefully, I've said enough to get you stimulated with regard to those things and the other things that you've heard. The question of course is what kind of educational program does one begin to develop, and I really like Gene's comment with regard to putting an emphasis on the "E" rather than the "V" in vocational education. What kind of educational program are we talking about developing, rather than training or schooling programs.

I'll stop there and give you a chance and I have probably used up my five minutes for tomorrow, Ralph; that's it, I've shot my wad.

Okay, questions? You can direct it to any member of the panel or just, and if--if you have question, just move to the mike, please, and state your name and your organization, I think that would be helpful, too.

MR. BUCKNAM: I'm Ron Bucknum, from NIE. This question doesn't have anything necessarily to do with NIE. In fact, Vernon, you took--you asked part of my question. We've looked at a number of demographic issues, but one of the new issues that has really great impact on educational employment success really hasn't been talked about, except for Vernon just mentioning it. About 60 percent to 70 percent of high school seniors have tried illegal drugs by the time they get to high school. Ten percent of high school seniors do drugs or alcohol every day. These are statistics from NIDA that does the annual surveys.

There is clinical evidence and certainly evidence that shows that drug use causes lower academic achievement and lower degree of social responsibility. One can see in the demographics, in terms of the suicides, which you have mentioned, the age group 15 to 25 is the only age group in the last census that decreased their life expectancy. We can see it in terms of drop-outs; the drop-out rates are increasing instead of decreasing. We can see it in terms of social violence and school discipline problems.

This is a symptom. This is an epidemic, really. It has been happening since the mid 1960s for people under 30. If you look at the data, there is a tremendous drop-off when you get over 35 years old, in terms of use of drugs, not so much alcohol, but other drugs. There is a tremendous drop-off in use of it, especially in use in the last 30 days.

I didn't hear anyone talking about that and yet that is a major problem in the schools. Locally here, the Fairfax County system has recently instituted a whole new set of things to deal with it.

If you talk with kids of drug rehabs, or you talk to kids who have been involved in this or clinicians who have been involved in it, it's clearly that the kids start doing drugs and then their grades go down. You talk to people in schools, kids do drugs, and then their grades go down and they become part of the group in the school that doesn't support the school and part of the culture that is anti-school.

I just want to know if anyone wants to talk about that issue as one of those in terms of, you know, how does that look in terms of what the perception of that in the failure of educational system to educate?

MS. LERNER: May I respond to that a little bit? This is a tremendously serious problem. It's not new. One form of drug abuse or another, depending on how you define drug abuse, has existed in this country since the country existed. Alcoholism was endemic during colonial days and clear through to the 20th century. We tried legislatively to eliminate it when we had the laws--the prohibition laws. That didn't work because society demanded access to alcohol--society wanted that drug. The cigarettes carry a warning that this may be injurious to your health according to the Surgeon General. Adults over 35 have stopped smoking as much, but the kids are smoking like crazy.

There are two aspects of this. There's supply-side and there is demand-side. On the supply-side, drugs are a very big business; there's a lot of money involved. Sam Leibowitz, who was a famous judge in New York City, once gave a talk on drugs and he said, if anybody were willing to stop it in Marseilles, where it is produced--a good portion of the cocaine trade at that point--and all the officials involved wouldn't get their bucsheesh as a result, there would be very strong supply-side diminishment of that.

On the demand side, what is it replacing? I, in the last 20 years, 25 years, have had children growing up and in the public school system and boredom is absolutely endemic, absolute, unmitigated, purposeless boredom. Students are bored.

When I was coming up, teachers were very well-paid. Teachers were the elite. You get what you pay for. Society is unwilling to pay in United States for an environment that will be attractive to students to learn in and where students can learn. Society is unwilling to pay for it; society will bear the cost of that unwillingness to pay for it.

What we are doing in one program, one bandaid after another, is paying the costs. I am in no position to address remedies, but I certainly think that that is the nature of the situation.

MR. PULEO: I think the boredom that Sue alludes to not only exists with students, we also see it in the work force. The recent statistics indicate that it probably costs us, in terms of lost quality or productivity, about $36 billion a year, due to substance abuse.

General Motors in one of their estimates said that it costs them $1,000 per car. We see it in--I'm afraid to go on public transportation sometimes. You were kidding about New York. I'm much more afraid of the operatives on the trains than the potholes on the bridges. If you remember that crash of the tank, it was a train crash, a derailment, in the South several months ago--it was a chemical car--it was proven that they were stoned. Certainly, looking at utilities, if you remember Pacific Gas and Electric, there was the problem with development there of the nuclear reactor; that was also attributed to substance abuse.

I think what has really happened is that, one, looking at the education system, we really did make a mess out of things back in the 1960s and 1970s. We took a system which fit in very well with society and prepared people and decide to tamper with it. We got rid of core requirements and brought in all sorts of electives and allowed people to take pass-fail; we just opened up the society and we paid.

The other thing that we did at that point in time was, we spent our time educating our scientists and our doctors and our engineers and we said teachers were really at a lower level. Those people that we put down as a priority, who are at the bottom of the rung, are now the people that are educating our children today.

The other problem with education is that, I think, as I was alluding to earlier, it is really totally, or becoming totally out of the sync with what the needs of society are. Kids go to school and they learn this stuff.

I felt school wasn't relevant in the 1960s because that was a period of time that we were challenging authority. Maybe children today or students today are feeling that school isn't relevant because in fact maybe it is not relevant to what their needs are. They have found it perfectly acceptable to go through some escape route and, as mentioned this morning when we talked about the supports and entitlements in society, on the other hand we do have a system politically and socially that allows people not to work hard. No one is really going to starve and die anymore. You know that you really can goof off and you can sort of slide through life at a level where, if you watch TV, you find out that even though you are poor, you are really living better than 90 percent of the world.

MR. BOTTOMS: Can I respond to that question with just a little bit of a different focus? I have a solution to that problem. Living in Fairfax County, I have often said we could solve most of the problems out there if we could get every teenager two milk cows to take care of, but it might create some other problems.

On the other side, if you go back--say to 1943, that was the year I entered first grade--there were 20 of us who began; four finished high school. This notion that education is worst today than it used be is just not so. Now, only four of us in that class finished. I never had a lab science in high school. My children are getting, today in high school math and science, courses that I never had in college.

I think there's another side. Maybe education hasn't changed as fast as it ought to, but there is no comparison between the quality of education my children are getting today and what I got during the 1940s and early 1950s. There is no comparison. It is far better today.

Now there are a lot of problems today. Education is not what we'd have it to be, but it's a hell of a lot better than it used to be.

MR. BUSHNELL: I'm Dave Bushnell, of the George Mason University. I was impressed by the speaker's comments on the aging work force. One of the issues that I see coming up for the next few year as the war baby boom bulge moves into the most productive period of their career--35 to 45--is a crunch on promotional opportunities.

My question, I guess, for the panel is, what might we in educational circles do to help those people who are not going to be able to move up to higher level job responsibilities, one, recognize that fact and two, perhaps find other ways to satisfy whatever their aspirations are. I think it is part of our work ethic that people should have the right to take on larger and larger responsibilities.

That's probably not going to be happening in the next 15 to 20 years and, Mr. Puleo mentioned urban guerrilla warfare, I think there's going to be internecine warefare within organizations unless we learn how to cope with this unrealizable aspiration.

MR. BROUSSARD: Thank you very much. Reactions and responses from the panel?

MS. LERNER: Well, there's a pyramid situation in every hierarchical work force. The Japanese example, which we are always given as being so wonderful, incorporates certain psychological aspects where the worker is sort of given the impression from the outset that he's really part of the team. That it is a team activity that is going on and as a result he enjoys a certain amount of psychic income, which isn't money, but it is income of a sort. He is also guaranteed a job, a lifetime job. Of course he doesn't have the mobility of going from job to job, so there are certain cultural aspects of this.

I don't know what the answer is beyond sort of approximations to answers that industry is making, such as the development of quality circles, so that the worker identifies himself with the job that is being done. It is his product. It is not an anonymous product.

One of the ideas I put forward to the construction industry was that if a construction worker stays on the job from the day the job starts to the day it should end, his name will appear on a plaque in the lobby as one of the people who constructed that building. That's psychic income; that's not money income.

I don't know how--that's a very serious political problem, because people act out their economic unhappiness in the political arena in the United States. I think that is one of those questions that will have to be addressed, that people will have to spend time thinking about. I don't think there are any easy answers.

MR. BROUSSARD: Matthew?

MR. PULEO: Sue mentioned earlier, I didn't know I was poor until someone told me I was poor. I think the same thing exists with people who want to get ahead. Very often they feel they don't get ahead because we've told them they don't get ahead. Why is it required that getting ahead is getting a promotion in an organization. I know we build hierarchies in organizations and, based upon a model where we could assume what interest rates were going to be and predict economic growth, et cetera, we could set up a system. That doesn't exist any longer.

Fortunately--now I am going to say optimistic--fortunately, the majority of the work force does not need to feel that they are getting a promotion. People can respond and do respond to many types of rewards in the work place. There are people who want to get involved in their work and want to improve their skills.

How many of you have known people that refused a promotion because they really like the work they are doing and they really want to get into it. Ten years ago, people were raising their hands; ten years ago, somebody might have said you have no initiative. Today we are beginning to realize that there is an initiative, that they want to become a better teacher, they want to become a better professional.

There are people that, as long as they are making enough money to keep up with the way they want to live, that's fine, they are satisfied, because they'll use their creative abilities outside of the work place and that is perfectly acceptable to them. So, maybe we should stop selling people the idea that, if you don't get a promotion and you don't get ahead, you are not succeeding. You can succeed in many ways in our society today.

MS. KYI: Could I respond to that? I think what the questioner really expresses is a sort of cultural notion, too, the sort of competitive sense that you are expected to get ahead, and that is not necessarily a value that everyone in America holds. There is also the communal sense, the sharing sense, and I think that as a value of the future you will be seeing that more and more. So, I think your assumptions about the competitive value being the kind of value that will motivate may not necessarily be correct.

MR. BROUSSARD: Bob?

DR. TAYLOR: I may be saying the same thing in different words. I think that part of it lies in attitude and the way in which we approach these things and the manner in which we set up various reward systems. I think the problem is not only going to be accentuated by the age cohort, but may also be further intensified by automation and the need for the kind of supervisory personnel and ratios that go with that.

It seems to me that the job redesign and the manner in which we organize to carry out work is a very important part in that we can think in terms of job rotation, enrichment. I visited an experimental program at the Ford plant in Cologne, Germany, where their apprentice program no longer was on the line but it was a work team. They had multi-year apprentices in there at various levels; it was a team effort. They had gone from pseudo-work to meaningful projects. People identified with the final product. There are a number of things that I think could be done in that regard.

MR. BROUSSARD: Ralph?

MR. DOSHER: I won't pass any judgment on culture or anything like that, but I can relate some experience we've had in industry. What's happened is that the "trickle-down" theory has worked. We have found that people who don't--and this is particularly true in large companies, and I guess that's where most middle managers are--achieve their goals, or don't achieve a level they want to get to, or don't achieve a certain type of job, will move off to another company where they can get it. Usually that's a smaller company where they have a better chance of competing. Or they will simply go off and go in business for themselves.

If you look in the high tech industry, a much larger percentage of the people who go off and start these new high tech companies are people who left because they were frustrated middle managers, not because they were technical geniuses.

What is happening, you're raising the quality of the people who are running the small businesses and raising the quality of the people who run their own business. This is simply because they have been moving out of jobs in the larger companies where they couldn't compete. Thus you are upgrading small businesses.

MR. MATTHEWS: Could I make a comment? I'm Howard Matthews. I can't help but observe that what we have been talking about here is the function of the work ethic in the value system of people and we are sort of talking about the work ethic as a static ethic that puts work, leisure, reward, in some linear sequence, when our credit card culture sort of tells people that that sequence is reversed and we enjoy first and pay later; so work for lots of people is psychologically a punishment for having done so. Or, it may mean, as you've already suggested, lots and lots of people, more and more people, no longer have to work in the paycheck sense, in order to enjoy leisure.

MR. BROUSSARD: Any comments from the panel? If not, the next question.

MR. PENROD: I'm Walt Penrod from Indiana and I would like the speaker or the panel to comment on regional changes. In Indiana, as a part of the Midwest, we have a number of the college graduates leaving the state, going to the Silicon Valley, Texas, a number of the other high tech areas, and yet the vocational education graduate tends to find himself employed in a near-term environment for his location.

Now, one of the comments has been made that entrepreneurship in vocational education will help to stimulate employment in that area. Are there other things that vocational education can do to stem the tide and increase the development of regional parts of the country in terms of this demographic flow of the high talent to certain locations of the country?

MS. LERNER: There is a very interesting paper which is called "The Nine Nations." It is actually a book, written by a reporter at the Washington Post who manned the national desk, and he would have reporters call in from all over the nation and he realized over a period of time that when a reporter called in from a particular spot he would describe it, regionally, as almost a nation by itself in that area. The North American continent and Mexico, part of Mexico, is sort of divided into nine nations that have almost regional integrity, in each of the regions.

Every governor's office, I believe now, every governor's office, has a planning function, an economic planning function, and the governors are becoming more and more regionally oriented. Business also is becoming regionally oriented and it might be valuable to develop a pilot effort in a region which would include the governor's offices that are concerned with economic development and vocational opportunity, the vocational educators in that region, and the employers in that region, to develop a plan for the region that would take advantage of the indigenous resources of that region. That is one way of approaching a response to that kind of concern.

MR. BROUSSARD: I think that certainly is a real concern. Let's go to the next question.

MR. DOSHER: Could I respond to what Sue said there? I think if you look at North and South Carolina, you'll find a perfect model for just what you're talking about. The vocational schools there have done an outstanding job in providing the leadership. In other words, the governor's office and the vocational schools have gotten together and are really making changes.

MR. BRADEN: Paul Braden from the Department of Commerce. I think that's a strategic place for me to try to make my comment because the Department of Commerce itself, Bob Taylor and some others know that I have been trying to get them here at the

Department to be more concerned about human resources development.

Recently, they've kind of become a little less rigid in their approach to the Nation's business health by adopting four strategic objectives, if you will, for helping the economy. One of them is human resources development, so we finally achieved that; regulatory efficiency; information improvement--you remember your comments, Sue, about the Census Department, which is one of our 20, 21 different bureaus that we have here, 36,000 employees; capital formation and technological leadership.

Now I think more and more at the Department of Commerce, the Secretary will become someone who's pulling those five levers, no matter where it might take us. For example, when you're talking about capital formation, you are automatically over with Regan in the Department of the Treasury. If you are talking about regulatory efficiency, you are over at EPA.

If you are talking about reducing barriers to organizational efficiency with business, you find yourself working on anti-trust legislation. So we are over at the Justice Department. More and more, and I think it is encouraging, we are seeing at least some of the federal agencies begin to get rid of this business that all human resources development has to be over the Department of Education or over at the Department of Labor, which are both, by the way, supply-side-oriented departments. We are very demand-side-oriented in that the business community is really our prime client.

In that regard, my advice would be, why doesn't vocational education begin to think more about restructuring and redesigning the ways that they produce their products. In that regard, it would occur to me that one ought to look at more of the technology, for example, that Dr. Merrifield was talking about this morning. The laser disk, for example, can hold 54,000 images. The other day I looked at a demonstration of all Vincent Van Gogh's paintings in both still form and also scenes from Europe where Vincent painted this and he did that and so forth, all nicely narrarated. With a microcomputer, I could go back and say, yes, but let me go back to a certain spot and see what he did there, and I can go back to the French village or the Netherlands, or wherever these things were painted.

Now, that took a lot money to produce, but I think that Bob Taylor and others could orchestrate in various subject matter areas a set of these kinds of disks that would bring, first of all, a great deal of competency to the teaching, because you would be getting the very, very best, on Vincent Van Gogh. It would also bring flexibility, because you can interact--we call it interactive video disk--with any part of the subject matter that you care to interact with. You can interact with it wherever you want to interact with it, at home, at school, at work, or whatever.

What the Commerce Department, via Merrifield, is trying to bring is, let's look at that among types of technology to see if we can't free-up vocational education to use some of that for the teaching and let some of the staff begin to deal with economic development problems, more outreach, getting out with the employers, getting sensitive to what the needs are, dealing with the governors' economic development planning units, which incidently we funded all 50 states to do that economic development planning, but a lot of them we couldn't really get into the vocational education enough because that takes a long time.

I've been working for three years to even get the Commerce Department to get into human resources development explicitly. It takes so damned long to get these things to happen.

That would be the question that I would ask, then. Why can't we think redesign within vocational education to look outward more, just as Commerce has had to look outward beyond its own little 20 agencies and folks.

MR. BROUSSARD: Bob?

DR. TAYLOR: As I understood the question, it kind of dealt with, how can we provide opportunities at home for our citizens to develop a competitive advantage over neighboring countries and others in international trade.

I think vocational education can be a part of that, but obviously it has to team up with a number of other areas. That relates to the point I was trying to make in my comment; that is, the need to try to get some coherence and consistency across various policy domains and to get them working together, whether it be industrial policy, or policies relating to savings, capital formation, research, and technology. For example, Ohio has what they call OTTO, Ohio Technology Transfer. We have a network of 21 postsecondary institutions that are headquartered at Ohio State, that are systematically attempting to move the technology of big business out into the field of small businesses in much the same way that we've moved the technology of agriculture over the years from the experimental station through the county agent system.

As I understand it, the Northeast is kind of casting itself as the brainpower section--research universities, high concentration of educational institutions--so it's looking for that competitive advantage, whether it ties to geography or soil, or weather or climate or tourism or whatever; it's that analysis and then putting it all together.

MR. BROUSSARD: Thank you very much, Bob. I think we have time for one more question.

MR. LESSER: I don't think we should take too lightly the fact that States are in competition with one another to attract business. Who pays for the training States provide private business? Who benefits? Businesses go into States for various reasons. How do we make business stay, as well as attract new ones.

MS. KYI: I would like to comment on the last two questions. Vocational education is not too well understood. Governors and their associates work at higher levels and don't realize how vocational education supplies workers. ...trained or beginning to be trained in the higher levels of education but not in vocational education. They suffer from having credentialed teachers in this area.

The other thing that I just want to comment on is that in our technology impact series, we have found that according to surveys, and one in specific, I think, by Stanford Research Institute, says that really what employers look for is the availability of trained workers, above land, above taxes, above all those other qualities, trained workers in a place will encourage them to move there.

MR. BROUSSARD: Thank you very much for your comments.

I think we've reached the hour and would express my personal thanks to the members of the panel and to our presenter, Sue, for doing just an outstanding job. At this time I will turn the meeting over back to the chairperson, Dr. Fellendorf.

MR. FELLENDORF: The only concluding observation I have is that we will adjourn for the day. We are scheduled to meet again at 9:00 tomorrow morning for another presenter and panel, on trends and changes in the economy during the remainder of the century.

Naturally, all of these topics are not mutually exclusive. We've been talking about the economy when we've been talking about social issues and when we've been talking about government issues, but tomorrow we are going to focus specifically on that, and then have a sort of a roundtable wrap-up which we hope will bring together, for the benefit of each one of us individually and for the four organizations that have joined together to sponsor this meeting, some specific suggestions which hopefully each one of us can put into our mandated recommendations and to Congress to the President.

We'd like to have each one of you here for that and to share in it and to let us hear your ideas as you hear ours. So, we are adjourned for today and we will meet together here at 9:00.

(Adjournment for the Day)

MORNING SESSION

March 16, 1984

MR. FELLENDORF: Yesterday, we had a very interesting and thought-provoking two sessions on the governmental changes and trends and on social changes and trends, and how they might impact upon vocational education. This morning we are going to address the topic of economical changes, changes in the economy during the remainder of this century and the impact, the potential impact, upon vocational training and education.

Before I introduce Jean Hanson, who will chair this session, I'd like to call your attention to the fact of two gentlemen who have worked very hard to make this conference the success that it apparently is and who will continue to work on the wrap-up proceedings after it's through. This is Morgan Lewis and Ned Collum from the National Center at Ohio State and I'd like to ask them to stand and be identified so that we could acknowledge their support.

Jean Hanson is a member of the National Advisory Council on Vocational Education and is one of the first female vocational administrators in Minnesota. Jean served as a director of a 13-school vocational district. She has an earned Ph.D in Vocational Education and is a past president of the American Vocational Association. For over half the States of this country, she has consulted on vocational issues and led activities, both National and State, with respect to vocational education. It is with a great deal of pleasure that I introduce, Dr. Jean Hanson, who will chair this session, introduce the presenter, and coordinate the panel discussion. Jean?

DR. HANSON: Thank you, George, good morning. It is my pleasure at this time to introduce to you our panelists and, following the speaker, each one of our panelists will make a short presentation to you and then we will go through interchange sessions much as we did yesterday.

I'm very pleased to be able to introduce the fine group of panelists that we do have today and I think that they will bring a very diverse background to our deliberations.

First, we have Dennis Bowden, who is Coordinator of Technical Training at Lawrence Livermore National Laboratory in California, where he manages technical training programs and interacts with community colleges. He has also developed training programs for industry including H.J. Heinz, Safeway, and Peterville Truck Manufacturers.

Our next panelist is Douglas Ramsey. He's on Business Times and I did tell him that I specifically watched the program--after I saw his resume--on television and he formerly served with Newsweek and with the Economist in London, as a journalist. He has spent over 10 distingushed years, we found in his resume, in international economics and business journalism.

Our third panelist is Gail Schwartz, who is the President of Garfield Schwartz Associates which is a Washington consulting firm specializing in problems caused by structural changes in the economy. She has provided policy analysis for the White House, Congress, and the Department of Housing and Urban Development.

Our fourth panelist is Francis Tuttle, who is now the Dean of Vocational Directors; he is the Director of Vocational Education in Oklahoma and at this time has the longest tenure of any of the directors of vocational education. He has done some very fine things in vocational education and in his state has a number of exemplary programs.

I'd like to recognize our panelists at this time.

Our speaker is William MacKinnon, who is the vice president in charge of the Personnel Administration and Development Staff for General Motors. He originally joined General Motors as a member of the financial staff in New York City and was transferred to Detroit with the personnel administration and development staff. Since that time he has become a vice president of General Motors. His education includes a Masters Degree from Harvard Graduate School of Business Administration. I'm sure that you are going to enjoy hearing from him this morning as much as I did visiting with him earlier. Bill?

MR. MACKINNON: Jean, thank you very much, and good morning all of you. On behalf of Jim McDonald, who is President of General Motors, I want to thank you for inviting our company, General Motors, to be a contributor to this conference. Jim regrets that prior commitments kept him from being here but it is my privilege to do what I know he would have done and that is to sketch for you a picture of the unprecedented changes and new directions taking place in our organization. Because my area of responsibility is personnel administration and development at GM, I have a special interest in emphasizing the human resource implications of these changes.

Like many of you, I'm sure, when we consider that we are dealing with the remainder of this century, there is a natural temptation to crystal-ball it just a bit. I'm restrained by the realization that, when it comes to forecasting, those who live by the crystal ball must be prepared occasionally to eat ground glass. I am going to do my best to stick to the facts and to the business I know best, that is, General Motors, it's people and transportation.

At the outset, let me say that we certainly agree with Jim Griffith's hypothesis for developing this conference, that there are trends that will cause vast changes in organizations, international competition, methods of production, and so forth. Your instinct to invite General Motors on this hypothesis was, I think, correct.

As I indicated, the thrust of my remarks will simply be to describe the sweeping change taking place at General Motors and then draw some general conclusions about our human skill requirements. I presume this kind of hard information about the work place will be helpful in the needs assessment process and may lead to recommendations about vocational education.

I think it's appropriate to begin by discussing the driving forces behind the series of changes for us at General Motors and to some degree others in the automobile industry. In a sense, the desire to survive, to stay in business, and to climb back to a healthy level of profitability, might pretty well sum up these driving forces.

That also would be a simplistic explanation. I feel a more comprehensive perspective comes from viewing these forces as the need to be more competitive and to internationalize our business. These twin pressures became rather acutely painful for us during the mid-1970s, even though we had been an international firm almost from our beginning 75 years ago, and even though we always saw ourselves as top competitors.

The first major challenge for us was oil. The shock of the oil embargo caused the sale of our large model cars to fall sharply, and we couldn't produce enough of the few small and mid-sized models that we had in the line-up to satisfy that demand. This, in turn, opened the domestic market to a flood of fuel-efficient smaller cars from abroad.

The new energy realities accelerated the down-sizing of virtually all of our models, and the aggressive practices of the import manufactures triggered several additional challenges. To our dismay, they demonstrated that they could produce and ship small vehicles to our shores at cost far below ours, with product quality that in many instances was remarkably good. If we wanted to stay in the small car business, we knew we eventually must lower our production costs and take the lead in product quality.

Then, in addition to some very difficult business decisions to be made from the North American market, we had to take some decisive steps in our international business. To give you some feel for what was going on in the international part of our business that is outside of North America, by the late 1970s this part of General Motors business, not Chevrolet, was our largest division with nearly 200,000 employees outside of North America. Chevrolet, just one of our 30-or-so U.S.-based divisions, was, in turn, almost as large as Ford Motor Company's entire U.S. operations.

Despite its size, however, what GM then called its Overseas Operations Division was something of a different world, both geographically, organizationally, and therefore, I guess, mentally. Having worked near this Manhattan-based division for ten years while with GM's New York Treasurer's Office, I would say that the twain met occasionally at the top levels but otherwise operated virtually as two separate businesses--overseas and North America.

By 1978, much of that had changed and what I call the true internationalization of General Motors began, not because of Japanese or German incursions, but largely because of an awareness that there had been a long-term trend of slow, but steady growth in the vehicle market overseas. We definitely were missing opportunities to grow with it. That was an awareness which, to understate it a bit, stimulated our competitive urges.

What was done to address this problem was a series of steps that I view as perhaps the most far-reaching of all our organizational changes. First, we detached responsibility for the international component plants from the overseas division and lodged them organizationally with the U.S. component divisions having similar product lines--things like batteries, casting, electronic equipment, things of that sort.

The overseas division was left largely with the vehicle business, and now for the first time many of the U.S. component divisions focused on business life outside their home areas of Ohio, Indiana, Michigan and western New York State. This has brought about a near revolution in the perspective of GM people in places such as Saginaw and Flint, Michigan; Dayton, Ohio; Anderson, Kokomo and Indianapolis, Indiana.

Next we decided in 1978 to internationalize the company by moving the overseas division's 1,000-person headquarters six hundred miles inland from New York to Detroit. Then in midstream we abolished the division, merged headquarters functions into the counterpart corporate staffs in Detroit and elevated the operation from divisional to group status, with the former vice-president and general manager of the old division being elevated to a group vice-president on a par with the person responsible for running the North American car division.

Now for the first time his lieutenants, the managing directors of huge vehicle operations such as Opel in Germany, Vauxhall in the United Kingdom, and Holden's in Australia, had become corporate officers and the peers of the vice presidents and general managers running Chevrolet, Buick, Pontiac, Oldsmobile and Cadillac.

What these moves accomplished was to signal to the organization if not the outside world, the importance of our international business with seven corporate vice-presidents so engaged where formerly there had been only one officer so assigned, and by virtue of the move to Detroit, brought the U.S. divisions physically and mentally closer to the internationalists and vice versa.

Beset with all of these challenges and aware that we were beginning to move in some new and perhaps perilous directions, General Motors felt this added up to a need to reassess and redefine our goals and our priorities. That's when we began some serious strategic business planning.

First, to compete in an energy-conscious world that needed more small cars, we borrowed a record $600 million in one fell swoop in 1975 to pay for a product program that would begin to down-size our cars domestically.

The second step in that program came in 1980 as we initiated a $40 billion capital program to give us new, more efficient and flexible production facilities here and abroad.

This ambitious commitment, a spending rate of nearly $1 million an hour, day and night, over the entire five-year period 1980-1984, was made in the teeth of a deepening recession and called for raising of these funds out of car sales. The $40 billion would be equivalent to a stack of $10,000-bills higher than the Washington Monument.

I might add that in 1980 GM sustained also its first full-year loss since 1921--more than $700 million. We made money all during the Great Depression of the 1930s.

The work has progressed pretty much on schedule. While most of the investment was in the United States, $8 billion of the $40 billion also expanded our production capabilities in Europe and Latin America. A part of our emerging strategic vision and running parallel with all of this change, was a massive number of organizational shifts. The objective of these was either to get us out of activities that no longer seemed viable for us, or to make operations more efficient through realignment. Just consider that all the following have occurred in the last five years in addition to what I've already described.

First, in 1979, there was the sale of the Frigidaire Division to White Consolidated Industries. Then the sale of TEREX, our earth moving equipment division, to IBH, a German firm; the merger of Rochester Products Division and Diesel Equipment Division; the merger of Harrison Radiator Division and Delco Air Conditioning Division; the movement of GMAC, our finance company and the world's largest such operation, to Detroit from New York; the voluntary spinoff of our wholly-owned engineering college, General Motors Institute; the rationalization of our commercial vehicle business and the creation of a new Truck and Bus Group out of existing parts of the business in several countries; the transfer of transmission and metal casting plants from Chevrolet Division to the Hydramatic and Central Foundry Divisions; the sale of our Clark Township, New Jersey, New Departure-Hyatt Bearings plant to a group of our own employees; and the total reorganization of our corporate Engineering and Manufacturing Staffs.

In the midst of that, back in 1982, we launched the most extensive review of GM's organizational structure since Alfred P. Sloan, Jr., created his celebrated design of the organization in the early 1920s.

Among other things, that study resulted in the most recent organizational shift, announced on January 10th of this year, the much-publicized regrouping of our car, body and assembly divisions, into two autonomous groups, one that will engineer and produce smaller cars and another group to do likewise for the larger cars. Both groups, or more accurately, their dealers, will sell and market the products of the other group as well as of their own.

It is interesting to me that many of the key executives in this new organization have international backgrounds and advanced degrees as in the case, for example, of John Grettenberger, the new vice-president and general manager of Cadillac, who has worked at our affiliates in both Japan and Germany, as well as at Oldsmobile in the State of Michigan.

Also, joint ventures have been undertaken by General Motors in Egypt, Tunisia, and elsewhere while buying a minority share in Suzuki, forming a U.S.-based robotics joint venture with Fujitsu Fanuc, and creating the now-famous joint venture with Toyota to assemble a small car in Fremont, California.

Another product of our strategic planning was the development of a new mission statement for General Motors--we never had one before--and a set of guiding principles to clarify what we, as an employee group, stand for and how we intend to accomplish our mission.

To underscore just a few of these principles that demonstrate new resolves, there's a commitment to excellence in all that we do; a commitment to sustain growth for a leading role in the world economy; agressively seeking new opportunities and business ventures that match our skills and capabilities, giving each employee the opportunity, environment and incentive to promote maximum participation in meeting our collective goals; high technology in manufacturing and cost competitiveness in each manufacturing unit.

That brings us up to the present. Now, to be sure, that is a lot of history in a short period. All too often the U.S. auto industry is held up by its critics as arrogant, provincial and unresponsive to change. I don't know what the sum and substance of all these changes look like to people outside of General Motors, but on the inside, veteran employees and executives have witnessed and been a party to a quantity and quality of change that many never dreamed possible in so short a time, and there's more to come.

At this point, I want to narrow my focus a bit and talk about specific directions we're taking that relate to changes in the workplace, in the work force and its emerging skill requirements.

The first of these is the overall promotion of the quality ethic and the all-out drive to lead in product quality. At General Motors today we have a strategic vision of what we are shooting for in product quality, and that vision is simply to offer world-class quality in every market segment. By world-class we mean parity with or superiority over the best in the field, product for product.

A corporate-wide quality improvement plan is now being implemented, concentrating on eight areas; these are: top management involvement; management communications; cost of quality information systems; corporate-wide training; performance standards systems; employee participation; early product development processes; and consumer satisfaction systems.

We are absolutely convinced that eventual success depends heavily on our people. Studies make it clear that willing employees who are trained and trusted can create a competitive edge in every quality effort, no matter what the product or its location.

Thus far we've trained more than 30,000 General Motors workers in statistical process control techniques and we know we have much further to go. Quality expert Phil Crosby has pointed out that people perform to the standards of their leaders. If management thinks that people don't care, its likely that people won't care. Our management, led by President Jim McDonald, has taken some bold steps to assure top vehicle quality for customers, demonstrating to employees, at the same time, that we do care.

In the summer of 1981 the plants producing the new J-cars were instructed to start production slowly and not release cars to dealers until they had reached high quality. That's exactly what they did and that sent signals through the organization, including the dealer organization, in a way that had never been done before.

In an even more dramatic move, the introduction of the 1983 Corvette was delayed for months until all requirements for top quality were met. In fact, there never was a 1983 Corvette since the new model was introduced with great acclaim, I might add, as in 1984; quite a risk, quite a lot of pressure, since the 1983 model was to have been the 30th anniversary of the advent of that car.

More recently, the introduction of our 1984 front-wheel-drive Buick Electra, Oldsmobile 98 and Cadillac DeVille models has been delayed since last Fall, delayed by management decision because we were not satisfied that those cars then met all our quality expectations. Due to these quality standards, the two new assembly plants where these cars are built, each one of which has 77 acres under one roof, and each costing $600 million to build, have been sitting largely idle. Our management has simply decided that we are not going to build and sell cars that don't meet our expectations for quality. The new introduction date for these models is April 5th. They're going to come out as '85 models and, having seen and driven them, I can personally assure you that they're terrific. Through a cultural change, backed by heavy investments, we think we are paying the dues necessary to assure world-class quality.

Moving to another significant direction, we found over the years that improvement in the quality of work life of employees produces positive results in virtually every area of performance, including the quality of the product. While management and employee efforts to improve the quality of work life of employees and improve relations with the unions go back more than ten years at General Motors, we've stepped up the pace of these efforts in recent years and we are committed to stimulating greater employee participation.

In some of our new plants, for example, as well as in some of the redesigned old ones, the entire work process has been designed with greater employee involvement and responsibility in mind. Joint union and management committees are overseeing a wide range of participative activities, from the design of employee work stations and production systems in some instances, to providing for retraining and reemployment of displaced workers.

If there is one new work pattern emerging from the heart of these efforts, it is the team concept. The self-managing, or autonomous work team, is coming to the fore increasingly in our new and our redesigned production operations. A similar team approach is seen in the hundreds of employee participation groups that meet regularly to solve product and process problems in the work place.

But greater employee participation does not come naturally, nor without training that will give people skills for effective interaction. Virtually all employee participation groups start with formal coordinator, leader, and member training that focuses on interpersonal and problem solving skills.

Looking now at a third major direction, General Motors is making determined efforts to apply the highest technology to improve product quality and our own productivity. Many new manufacturing and assembly techniques, such as robotics, lasers, statistical process controls, just-in-time inventory control, are helping to improve quality and reduce costs. Through heavy financial investment and stimulating employees' creative impulses, we want to be world leaders in technology. We already have a very good base in the automobile business, one that we may be able to use as a springboard into nonautomative business ventures of the future.

Incidently, it has gone unnoticed, I think, by nearly everybody, but General Motors is now the world's largest manufacturer of computers, the kind we call control computers. Every GM car has at least one of them on-board.

One of the obvious implications of this trend is that virtually all employees and managers will be working with more technology than ever before. The more they know about technology and are comfortable with it, the more productive and valuable they are going to be.

An additional goal we are pursuing vigorously is to learn how to build sub-compact cars in this country on a cost-competitive basis. We are moving ahead on two fronts in order to provide a breakthrough against the substantial cost advantage in small cars now enjoyed by many of the Japanese manufacturers. One is a project which we call Saturn, in which we are investigating any and all techniques to bring about a new family of sub-compacts. The other is a joint venture with the Toyota firm to build small cars for a limited time in one of our vacant GM assembly plants in California.

The latter effort with Toyota is only to buy us time to give our dealers products for the interim and to help us learn from the joint management effort in that venture. With the Saturn project, on the other hand, we'll use start-to-finish innovation for achieving integrated design, engineering, manufacturing, assembly, materials management, and human relations. As Saturn's concepts then spread throughout our entire product line, they'll help ensure that the American auto industry remains competitive and is able to provide secure, good-paying American jobs.

The Saturn development team was asked to start, in effect, with a clean sheet of paper and is not bound by an introduction deadline for the small vehicle on which they are working. I think it is fascinating as well as, I suppose, symbolic that the Saturn program manager is in his 40s, has at least two master's degrees, has worked in engineering and manufacturing assignments at Chevrolet in this country and at our large Australian affiliate, and was also director of personnel development in my own staff, responsible for, among other things, quality-of-work-life activities, education, and training.

Although it is too early to say, it's anticipated that workers in the system developed in the Saturn project will work in teams and have responsibility for performing more extensive operations. This potentially could influence future requirements for incoming skill levels and training.

I'd like to turn now to a discussion of a number of approaches in programs at General Motors that have as their objective the improvement of employee quality through recruitment and selection, through training, and also through retraining and reemployment, where workers have been displaced. Perhaps these as directly as any other indictors have implications for our future skill requirements.

In talking about our new mission statement, I mentioned the company-wide commitment to excellence in all elements of our product and our business activities. It is central to all that we do. But in reality it has been a theme at GM for a number of years where the selection of people is concerned. To make sure that we have excellence in all our activities, we have been attempting to make sure that as we recruit, select and promote people, we are getting the quality we need and are paying for it with our very competitive wage and benefits programs.

At the college level, in the late 1970s we redirected our recruiting efforts to broaden our recruiting base and at the same time be more selective of the kinds of training and skills that are going to be useful to General Motors. The emphasis is on recruiting at the very best schools and going after the very top students. The same goals are being pursued in our cooperative engineering programs.

Aside from campus recruiting, our selection processes, for hourly-rate and salaried people have also been changing in the direction of higher quality, with a team assessment process being utilized increasingly as the way to assure that we are hiring the best and will have a good match between the person and the organization doing the hiring.

In virtually every plant that GM has opened in the last ten years the team assessment process has been utilized either partially or exclusively for selecting hourly-rate and salaried employees. In a few locations today, hourly-rate employees working in teams are responsible for determining the selection criteria for new members of their own work groups, for conducting assessment interviews with candidates and making the selection decisions.

Among other things, the assessment process forces the group to define their requirements and seek them out on a systematic basis. We are also requiring that group assessments be utilized in selecting people for certain higher management positions, and conducting some performance appraisals of those people once onboard.

Once people become regular employees, they become eligible for certain training opportunities, most of which could be viewed as vocational education in the generic sense. As you may know, General Motors operates an extensive internal education and training system. We also offer employees tuition refunds for job-related courses and a fellowship program for graduate school. GM also supports higher education with scholarships and grants to schools.

I am extremely pleased to report that General Motors has just formalized its policies and many years of experience in employee training and development by adopting a comprehensive statement of training philosophy. It was announced in January by our Executive Committee, the top management group that sets policy for General Motors. The new philosophy statement establishes policy and is a significant step in our ongoing efforts to enhance training and development activities in the company.

As minimum training requirements, the new philosophy calls for training to be applied at five crucial points in a person's career; these include when a person is hired, when a person takes on a new job, when job performance requires improvement, and when new conditions require changes in technology, products or procedures.

Of special significance, I think, is the fact that it includes training to be offered when a person leaves the organization, through the closing or indefinite suspension of an operation, as a means to help the individual secure employment readily.

There are a couple of additional things regarding our internal training system that I think might interest you. One is the increased emphasis on technical training. In addition to the technical training available to people in their own communities, we have been adding to the curricula of technical courses that we offer internally for salaried and hourly-rate employees. For the most part they are courses that are difficult to find in the community, and/or are specifically related to GM's goals and processes. For example, there is a blossoming of technical courses that help reach our goals in quality and reliability.

A fascinating new tool has become available in teaching technical content, and it is fast becoming the darling of our employee training activities. We have been installing our own new computer-aided training system that links training terminals in all of the plants, and there are about 150 plants in this country alone, to a main computer in my staff that contains program hardware. For the students, it's a lot like playing video games, I suppose, except that they are training courses instead of games. Hundreds of individual employees at various locations will be able to take selected courses simultaneously.

Right now, 94 General Motors locations are using these terminals and more than 12,000 employees have taken courses on them in a very short period of time. Most of the courses available thus far are technical, such as robotics, electronics and hydraulics, and are being taken by our skilled trades employees. But basic skill courses in the high school GED series are also available on it. We plan to continue expanding this economical and effective method of training delivery and management.

Of course, all of this is meant to support GM's goals to apply the highest technology and produce world-class product quality. As we said, well-trained employees are essential to meeting these goals. However, we discovered several years ago that some of our plant organizations were not fully capable of providing for their own technical development. As a result, our education and training staff launched a technical development program that is helping each division and plant develop their resources for designing and carrying out the technical training they need to meet short- and long-range operating goals. This also results in some employees being sent to technical programs in the community.

In addition to these efforts, there are a number of fairly new and, we think, innovative joint union and management training activities which have been initiated. They tend to be for three purposes. To give hourly-rate employees skills for participating in quality-of-work-life activities, to address the needs of displaced people and to give them skills to work with new technology. The national labor contract negotiated by General Motors and the UAW in 1982 also provided a source of funding for such joint programs. After GM closed two of its assembly plants in

California in 1982, due to market conditions in the industry, a joint reemployment and retraining program that included funds from this source, along with State and Federal funds, was put in place to assist the former GM workers. The program involves a total of $10 million.

On the heels of that one, two additional joint programs of a similar nature are being developed now in Flint and Pontiac, Michigan, to assist laid-off workers in those communities. However, at the Buick Division, or Buick City, as we now call it, in Flint, local management and the union created a somewhat different but effective way to cope with displacement. Two years ago, they established the Buick Employee Development Center to help a smaller number of displaced workers to gain new skills. Today the center, which is in a former Flint high school, is also open to employees having a broad range of needs, from basic skills to high-tech training.

Now, for the final segment of my remarks, I want to address briefly the three occupational fields where we, as an organization, seem to interface most directly and frequently with the public vocational education system. These occupations include automotive service technicians, apprentices for the skilled trades, and salaried clerical employees.

The first of those, the automobile service technicians, are not General Motors employees at all. They number about 90,000 and are employed by the independent dealerships that sell and service General Motors products; but because they are so important to our goals in quality and customer satisfaction, we need to consider them as we talk about change and new directions.

General Motors has always provided these dealership employees with new product update training so they can do a first-rate service job for the customers, the dealers, and us. This work is carried out by GM's Consumer Relations and Service Staff, who provide about 180,000 man-days of training per year to the dealer mechanics and other technicians at the 31 GM training centers across North America.

As product improvements in safety, emissions, fuel economy, and performance became more complex, we and the dealers became concerned about training people for skills that would make them equal to the challenge. The mission to increase their technical competence was never greater because the pace of technological change in our products was never greater.

GM's historically good relations with the vocational education schools took a new direction in 1970 as we launced a new pilot program for dealing with this training dilemma in a new way. At that time GM started a program called the Automotive

Service Educational Program, or ASEP, at Delta College near Midland, Michigan. This is a two-year associate degree granting program for new technicians working on a co-op basis for General Motors dealers. We donated substantial amounts of equipment to the school and helped train their instructors on our latest products.

The experience with the first class was extremely successful. Since then, the ASEP program has been adopted at 15 additional community colleges near major urban areas and is expected to be in a total of 25 schools by the end of this year, and it won't stop there because our needs and the schools needs don't stop there.

I think this is a case of strengthening our relationship with vocational education by taking advantage of an educational resource in a community. We think this will turn out to be one of the most important contributions our company has made to vocational education. This link-up for product-specific training conceivably could become a model for other manufacturers in other types of product service. I think it's worth looking at.

With respect to the training programs for GM's skilled trades personnel, we currently have about 3,000 apprentics, and another 5,800 employees in training as a feeder system for a group of skilled trades journeymen numbering approximately 77,000 in this country alone. Due to reduced production levels during the recession, many of these people were laid off, but now most of them are back to work.

We've always relied heavily on local vocational education institutions for helping to train this group. We require each apprentice to take 567 hours of related training and each employee in training to take 270 hours of related coursework. The local schools have done an outstanding job for General Motors over the years.

As a result of the long period of no hiring, the apprentice program coordinators say they have a backlog of applicants, but several things are different about these applicants. Previously many apprentices were hired directly from high school. Now the average age of applicants is a good deal higher. They also tend to have more work experience and technical training. This is because our selection point system is weighted to favor those with work experience and training. So, while they are waiting with their names on the applicant list, they tend to take math and technical courses in the community schools in order to earn extra selection points.

We are looking at an unusual situation to be sure, but, again, it reflects an increased use of community-based educational institutions to bolster vocational skills. Many plants are studying additional ways to utilize these institutions.

Our third large occupational group that typically is trained by the vocational education system includes our clerical and secretarial employees. The principal observation I'd make here would also be fairly obvious in many large organizations. Most clerical employees are using electronic equipment, notably word processors, in place of typewriters and calculators. The word processor manufacturers are making a fortune, I think, at General Motors. For us, this came very quickly and we'd have been in serious trouble to train people on the new equipment had it not been for good training programs that were available from the equipment manufacturers.

Many community schools also offer fine programs in conjunction with the manufacturers. As you may know, the clerical people most in demand now are those who can operate word processors.

We asked some of the people in General Motors who manage the training activities I described, who interface with the vocational education system, to give us a few of their key thoughts about that system and about the future. Distilled somewhat, here are their observations:

- We need bright, capable people in our technician jobs who can read well, reason well, and have good interpersonal skills. We can't afford any other kind.

- We still have the same old problems; many kids who don't do well academically are steered by parents and teachers into voc ed programs. If they take easy electives, and continue to goof off, we end up with the graduates who can't compete and need remedial training. We should start at the fifth, six, and seventh grades with vocational awareness programs so that the youngsters can set goals, take the tough courses, do well and be proud of their career choices.

- Due to the low birth rate in recent years, the increased use of robotics in manufacturing, we are likely to see shortages in some skills and a decline in others. People with an electronics background may be scarce for a while. We possibly may see fewer maintenance and repair skills for traditional sorts of machinery.

- Manufacturers must donate more of their current equipment to the schools and help train the teachers on that equipment. That's how you get current technology into the schools. Also, community colleges and other local institutions have made big advances in vocational education. High school programs now perform mainly the function of career awareness, exploration and basic skills training.

That's the summary of their thinking. It appears we will need people with more technical knowledge and interpersonal skills. We will also be more selective as we hire, wanting to get the best quality we can for the limited job openings.

As to the future in our business, we see a bright one, a bright one for the automobile. We think 1984 could be the first 10-million-plus car year domestically in five years. On a trend basis, consistent growth should result in something like 20 million during the 1990s. At the same time, total free world sales could reach almost 40 million units by 1985. That would be a new record. By 1990, that total could hit 45 million units.

I've enjoyed this opportunity to share with you this look at our future. Last year we at General Motors celebrated our 75th anniversary as a company. We and the others making automobiles have been characterized as a smokestack industry, but I think that for General Motors and its products we'll see far more change in the next 20 years than we saw in the last 75 years. We'll still see a few smokestacks on the outside, but we'll just have to find a new term to characterize what we see going on in a very rapid had changeful way on the inside. Thank you very much.

MS. HANSON: At this time, I'd like to call on our panelists. First, Dennis Bowden.

MR. BOWDEN: Thank you Jean, I have titled my presentation "Time and Technology Wait for No One." This title is taken from a recent article in graphic arts publication called "Pending Impressions" by Fred Philips. The new technologies not only effect traditional crafts and trade, but also cause changes in all vocations. My colleagues and I in corporate training have been involved in the technical education process, and we feel that the traditional education processes are constantly playing catch-up ball when it comes to meeting the needs of a modern work force. This "training-lag" as I call it, is one topic that I hope this conference, and other like it in the future, will address.

I would like to add a personal note. I have a common thread with many of you here regarding vocations and education. I worked by way through college and supported my wife and two children, at the time, by working in a vocational trade. Upon graduation, I went into the teaching profession as a high school science teacher. I then made the shift into corporate training at a research and development laboratory. Therefore, I feel that I have a "foot" in each of the camps; one in the traditional education process and one in the traditional vocational process. Even though I am no longer employed by the public educational system, I still work with school boards and with local trade advisory councils. I find many of them to be very responsive and other boards to be very resistant to change. Sometimes they want to change for the better, but they lack direction and perhaps are afraid of making the needed types of changes or adjustments.

There is a diverse group here at this conference; it is impossible to deal with each one of your special interests, but I brought some figures which relate to the vocational job market, with which we all are involved. I work for the Lawrence Livermore National Laboratory, which is a high technology research and development facility. At the Lab, the skilled craftsmen, tradespersons, and even unskilled support workers are in a very healthy occupational situation for the remainder of this century. The figures that I am sharing with you begin with the top of our workforce. For every four Ph.D. physicists hired, 19 engineers are added to the staff. For each of those four Ph.D. Physicists, 125 technicians and craftsmen are needed to support them on their research projects. Another group of 200 administrative people is also needed to support those previously mentioned. Jobs for qualified support people in the high technology research and development areas will always be available. I would like to briefly respond to three items at the request of Dr. Ralph Bregman. The first of them is the employment needs and kinds of skills of people that we are presently hiring. In other words, we are an end-user in this process of people that you, as educators, help to produce. We hire pepople who can qualify for security clearance; beyond that, we recruit employees from all occupations and at all levels of educational backgrounds. Being that my employer is involved in technical research, the majority of jobs tends to be in the technical engineering areas. That brings me to my second point: my own perspective on retraining. The surge of new technical information makes necessary not only training of untrained employees, but also retraining of currently hired employees. This is done both in-house and in conjunction with the local college and university systems. From this time on, you will see many occcuaptions changing so rapidly that they will require constant updating and sometimes retraining.

The third topic addresses Bill's statement and observations regarding the future workforce, which I will comment on in the remainder of my remarks. First of all, let me mention the Lab's employment needs of the future. Even though it is the largest computing center in the world, the vast majority of its craftsmen and technicians are not computer programmers, and I predict that for the remainder of this century, the majority of them will still not be computer programmers. However, a large percentage of them will become computer ursers, or rather, before you misunderstand my remarks, almost every one of them will be, shall I say, electronic users.

In the present industrial environment, a renewed need for understanding of electronic process controllers is arising. If people do not use them directly in their jobs, they will probably use them indirectly, such as under the hood of their car to help them drive to work. I had a laborer tell me recently that he could not figure out how digging a trench was going to be affected by the electronic industry, but when the new backhoe came in, it had a digital read-out on the dashboard. It tells him the extension of the boom, the weight of material in the bucket. This is but one illustration of how the electronics age is moving into all facets of life and work and is no longer restricted just to computer programmers. Computer literacy may not be absolutely necessary in all professions, but electronic awareness or what I call enhanced digital awareness, is something everyone needs. Even my three-year-old daughter punches the digital tuner on the TV and turn it to the educational channels. Microwave ovens now have electronic tuners, and high voltage electricians who previously used volt ohm meters, now use digital readouts and printouts on every one of them.

In the professional world, electronic technology can lead to shifts in vocational territory. In my area, there are a lot of emergency diesel generators in case of power failure. The mechanical governors of these diesel generators are being replaced by electronic governors. These require an electrician's skill to repair. All of a sudden, an electrician must be brought into what had formerly been a mechanics's territory. As far as mechanical generators are concerned, couldn't the mechanic be upgraded into the digital electronics area? Presently, I have two employees attending school in Ft. Collins, Colorado--a high voltage electrician and a maintenace mechanic. They go together in order to work better as a corporate electrical mechanical team. Thus, educational training, in all fields, must be updated to handle the increasing demands made by a more sophisticated electronic technology.

At this point I would like to address something that is important to all of us involved in a corporate hiring picture. The people that we are looking at to hire often are lacking in math skills--absolutely lacking. They may not need to know trigonometry, but they do need to know basic skills, such as percents, fractions, decimals and ratio and proportions. Also, writing skills are atrocious. We have found ourselves developing not only technical training programs to keep up with the new technologies, but we also have to invent in-house corporate writing courses. We who are involved in the technical/vocational areas even must develop or purchase some communications skills programs. Math and writing skills, as well as other basic communication skills must be acquired to enable people to keep up with the electronic or enhanced digital awareness era.

In addition, this new technology is producing jargon that did not previously exist. A few of the new words have become commonplace in our language: JEEP, which stands for general all purpose vehicle; SCUBA, which is an acronym for self-contained underwater breathing apparatus, and LASER, which is an acronym for light amplification by stimulated emission of radiation. New employees must deal with many more new terms being "invented" each year. This will negatively impact the employees unless they have at least achieved the basic skills in communication and have learned to be adaptable. Therefore, with technologies changing as fast as they are, even the nontraditional fields that are not presently considered "high tech" must develop employees that are more flexible. We are going to have to train people to accept and use the infusion of not only new electronic terms, but also new electronic devices. These employess of the future will have to roll with the technological punches that will be bombarding them on a daily basis. Basically, we can no longer hire an employee off the street and expect him to function, unless he is given in-house training. Managers that have been around for 40 years tell me that they used to be able to hire a person off the street, who was trained by the military, and his craft would be good for a steady career of 25 of 30 years. The monumental changes in the last ten years alone have made that steady-state job situation impossible. Hence, constant, on-going retraining must become part of the work program. In his book, Amazing Race, Davidson, mentioned three areas that affect all facets of industry and manufacturing. Of course this book was predominantly about computers, but sections of it have universal applications. Basically, he says the technological cycle is quickening. In other words, the user life of a product is very short, the profit returns are actually shrinking due to international competition, (a subject Bill alluded to earlier), and research and development costs are rising. This means that in manufacturing, marginal profit-making devices and products, will be dropped from production houses. This creates changes in business technology, which eventually requires retraining of those people involved. This much needed retraining of people must be constant and on-going. One coordination of retraining we have done at the Laboratory is with the local community colleges. The college supplies the classroom, and we supply the word processing terminals--in this case they happen to be Wang, but other brand names are moving into the field; the college suppplies the instructor, and we send our people directly to him/her. Basically the upgrading of technical training programs can be done using existing resources, if the effort is put forth.

The short prediction is for a good economy in the next year or so. Our production rates appear to be up about 1.2 percent or more, and it looks like corporate research and development is taking place at a higher rate than it has in the past, as Bill mentioned. I believe that investing in corporate training, in league with community colleges and vocational schools, is an absolutely valuable and necessary investment that will return ten-fold, much like Columbus' sailing to the New World brought eventual unpredicted returns to Europe. Those sending him did not originally know what the returns would be, but those returns were monumental, when they took place.

In summary, time and technology will wait for no one. I would like to encourage each of you in your portion of this work, and in your liaison with other people around you. I have served on some trade advisory councils, and it takes movers on those councils to make changes and advancements, not people who want to just sit there. You are going to have to formulate these changes yourselves, and I include myself as part of "you". While you are here in Washington, D.C., contact your local Congressman. I mentioned that I appreciated his vote last week on some recent issues that affect vocational education. I was watching my Congressman on the C-Span, the cable TV network which gives us the deliberations directly from the House of Representatives, and I encourage you to do the same. Once again, I would encourage all of you to continue the efforts you are doing to upgrade our outlooks on education and training and to exchange information through conferences like this. Thank you.

MS. HANSON: Thank you, Dennis. Our next panelist is Douglas Ramsey.

MR. RAMSEY: Thank you, Jean. I speak as someone who doesn't come here with a lot of direct vocational training experience or firsthand knowledge of that particular side of business, but I think what I would like to contribute is just a few thoughts based on Bill's speech, about three areas--the obvious ones--the economy, training and technology.

If I can take the last one first, I think first of all, GM is probably a very good microcosm of what is going on in the whole economy, certainly the manufacturing-based economy.

On one hand, smokestack industry really is disappearing. Technology is changing the work place; it is changing what you are dealing with there and inevitably it means fewer jobs in those industries. It cannot mean otherwise. Automation is here.

GM, like almost any other major American company, is involved with competing on an international scale with companies that can afford automation and have decided that it is the only way to maintain a competitive edge in the manufacturing industries.

I think there is no doubt that the total number of jobs in manufacturing will probably decline. At the same time, you are dealing with robotics, with very complex computer systems--CAD/CAM and others--which mean that the skill level of workers in the industry and skill level of managers trying to manage these companies has to become much more sophisticated than it has in the past. I think GM probably exemplifies one of those companies that, a few years, three or four years ago, decided they simply had to make a go of this; they could not continue to lag in this field, given the international competitive climate.

At the same time, technology is dramatically changing the way we can impart that knowledge of how these new systems are going to work. Here again, we should applaud GM's move into computer-based system which allow an entire company, or employee, any employee, in a major company, whether he is in Fremont, California or Detroit, or New Jersey, to benefit from highly advanced sophisticated training programs, supplied by the corporation internally without a lot of government intervention. I think this has got to be the wave of the future.

Whether we like it or not, I think, the general political, as well as social sense of the country today and probably for the remainder of this decade, irregardless of the administration that is in power, is probably going to be a greater reliance on the private sector and less constant going back to the public sector to provide funds; therefore, the experiments in training within the corporation, I think, probably do hold the key to the future.

Another comment I would make on that, however, is in line with a general sense that private enterprise has got to do more than it is doing right now. Businesses must provide incentives for all those bright people who are going out and writing software programs, doing the engineering work on new computers, doing all that sophisticated new technology. They should be encouraged to see the entire business of vocational training and training in general as potentially profitable.

If I can address myself very briefly to one notion that has come up in the course of the presidential election campaign so far, one of Gary Hart's ideas, which I think probably is not at all at odds with the thinking of the Reagan administration: the individual training account, sort of similar to the individual retirement account, into which employees (ITA), the government, and corporations, would contribute in various parts. There will be a lot of discussion as to what they should be--to entitle any individual, particulary in those industries where you see a decline in total employment and the need to retrain into other industries or other sectors of the single industry.

This has got to be a way to go because it is probably going to be the only way that you are going to get small, entrepreneurial, private companies going into the business of training, as they see these hundreds of thousands of people with ITAs, willing to go in and turn in their coupons, or these accounts, for training in a particular field.

I think it is an area that, frankly, doesn't exist right now, and could be well a boon to the economy, simply because so many people are aware that they do have to retrain and keep ahead.

If I can talk about the economy very briefly in the context of General Motors. GM faces the economy in a way that no one else does because they are perhaps the single largest employer right now in the private sector of the economy. They are going through good times right now. But, those aren't going to last. They aren't going to be here forever. We are in a recovery at the moment. I think no one is predicting or very few people are predicting any real recession until the end of 1985, at the absolute earliest. But it will happen.

Last year the auto industry made nearly $5 billion, a very profitable year. They are talking about conceivably making $10 billion in 1984 profits. That's a large amount of money. After that, no one can count on those levels of profits.

GM, other companies in that industry, and other companies in a lot of other industries, that are much more profitable now, have to be doing more at the moment to pare down their work forces and at the same time adapt their work forces to a very dramatically changed manufacturing economy in this country.

If they do not do it in 1984, if they don't do it by early 1985, they will not in fact have the money to spend on these sorts of programs. If ever we were going to see a push in the private sector of the economy to get over some of these problems and to seek new solutions to the general problems of training--and now I guess I am talking a little more about retraining than initial vocational training--it's absolutely essential that that money be spent now, because that money is not going to be there one or two years from now.

The continuing state of the economy is such that, I can see deficits, large budget deficits, in 1985, 1986, and 1987, no matter what good news there is on a day-to-day basis, or bad news on a day-to-day basis out of these deliberations between the administration and Congress.

I think that that means we are going to have continuing high interest rates in this country and there are certainly a lot of people who feel that as that persists, as the budget deficits grow higher, as the debt service burden of the U.S. government, the federal government, continues to grow, you're going to be crowding out borrowers, the private borrowers from the market. It's going to be very difficult to not, very difficult to prevent a true resurgence in very high interest rates in this country which is bound to lead to a recession of some sort I would guess, in fact not before the end of 1985, but certainly by 1986.

We have a very brief window in which to address a lot of these problems in manufacturing industries. I think that a lot of companies like GM are aware of this. There are a lot of companies--like control data--that are doing a lot in this field. I think it is absoultely essential to take advantage of that window there right now.

One last comment: I'm very interested in technology and have been for quite a while. I think that one of the single things that's overlooked most in this whole business is the extent to which telecommunications and computers both are going to dramatically change the way that you can train people. I have seen a lot of experimental stuff out there right now, in two-way interactive, video disk-based, telecommunications-based systems, which are starting slowly to change the on-site training of workers in factories; but over a period of time, it's going to make it so much easier, more effective, to give everybody the chance to retrain.

I think, again, GM is doing a lot in this field, but so are a lot of others. I would personally like to see a lot more attention given to those technologies that two, three, four, five years from now, are going to have the greatest capability to enhance the training, training industry as such, and see more put into that direction, more tax-based incentive programs to get companies to implement these things. I think that's an area where, if we are going to forego any tax dollars, it is probably one of the most worthwhile areas of all.

Thank you.

MS. HANSON: Thank you very much. Our next panelist is Gail Schwartz. Gail?

MS. SCHWARTZ: Thank you, Jean. I was asked to address you today because I am an economist and I always used to be very proud of that fact until the other day when somebody told me that an economist is somebody who loves to play with numbers but doesn't have a good enough personality to be an accountant.

Fortunately or unfortunately, it has been my lot to spend my professional career working very heavily with communities that are undergoing structural economic change; first, working with a private consultant during the urban renewal phase, if you remember that far back; later with the City of New York when I ran the economic planning and developing program for about seven years; and then later with a think tank here in Washington where we did a lot of work on regional economic change for various government agencies; and now as the consultant to State and local government and Federal agencies that are dealing with various aspects of this problem.

Although I am going to second some of the comments that the earlier speakers have made, I will try to do that very briefly and draw some contrast between what they said and what I see as a result of my experience.

First, let me second what the previous speaker just said about technology. I've taken a hard look at that--at technological change--in many industries, both through my work and through my hobby which is writing books on week-ends. I agree very strongly that we are going to have tremendous invasion of technology in all sectors of the economy, not only in manufacturing but also in services.

The pace of this installation of technology will be unprecedented. We will never have seen a pace as fast as this. Whereas before a new innovation would take 50 years to be diffused throughout all industries, I think electronic technology and laser and fiber optics-based technologies will be everywhere including small firms within another 15 years.

Mr. MacKinnon didn't mention, for example, that GM is planning to install, by 1990, 14,000 robots at an expenditure of something like a billion dollars; that also, a contingency plan for cutting costs at GM envisions the lay-off of some 86,000 workers.

I think the first thing that we all have to do, no matter what our profession, is recognize that technology is not something to be afraid of. New technology is the only way that business and industry in this country can remain competitive and can sell its goods to Americans and to foreign purchasers.

So we've got to go with the flow. We've got to get that technology in place, in the factory, in the store, in the warehouse, as fast as we can. That will inevitably mean that a lot of people are going to be thrown out of work and there's no point in pretending that won't happen. There is going to be a tremendous displacement, but I don't agree with Mr. Ramsey that that means we are not going to have industry anymore; it just means that we will have the same or more output in basic industries with many, many fewer workers.

It seems to me that the vocational imperative that hides in this scenario is to figure out where the demand for human labor is going to come from. I feel, and my experiences indicate that I'm not wrong here, that we have an extremely inadequate labor market information system in this country and that a vocational educator is doing his work with at least one hand tied behind his back, or maybe two, because you just don't have the kind of information from business and industry that you would need to look ahead. I firmly believe in the crystal ball, as you might have gathered.

You have to be able to plan ahead, to adjust your curriculum, to determine what competencies you're going to teach, to arrange to acquire the equipment, to lobby the governor and make sure he pays for the equipment, and on down the line.

I would say that when a national investment in a labor market information system that lists the kinds of skills that are going to be needed in this technology-based economy, that defines them in language that both employers and vocational educators can understand.

We recently did a project in Pennsylvania where we looked at the vocational education system as part of our analysis of the quality of the labor force. We found that the vocational educators were using one code and the economic developers were using another code to describe what was required; neither understood the other's language.

The first very simple, very obvious common-sensical step would seem to be to find a common language to speak or at least to have a pony to translate from the vocational education codes to the sic codes that industry and employers use.

But even more important than information, or equally important, as information about the demand for skills that will be needed in the future is information about the supply of labor available to fill that demand in different labor markets.

Right now we are all working in total ignorance in any labor market about what the supply is and so it is all very well to say, sure, we're going to have to train people to be CNC tenders, but if we don't know how many people in a labor market are already there available with the skills that are needed, then we still don't know how many people to train or educate with those skills.

Again, I think the information system on supply of labor generally comes from Department of Employment Services. Occasionally, in some states, it is augmented by vocational education data that is developed on its own, but I've seldom come across a situation where the match is very good; so you continue to have that old bug-a-boo, the job skills mismatch.

Now, in terms of the kinds of skills that changing technology is going to create demand for, what I see is a sort of hollowing out of the center. Instead of progressive skills that one learns on the job throughout a long work history, I think we are going to have what you might call basic entry level skills which are not very difficult to learn. I mean, they are essentially going to be button-pushing, a very simple arrangement of sequencing of tasks that control computerized equipment, and then the creative innovative high skills, and there's not too much in the middle.

What that suggests to me is that we don't need to train people for what you might call crafts anymore, although I'm not sure that's an absolutely accurate term, but you certainly need to train them to work with the equipment in basic arithmetic, to be able to read a diagram, to be able to write a simple instruction and so forth. Those are all the basics that everybody talks about.

It seems to me that you also have to be preparing people to make decisions and to know what to do if things don't work out the way they're supposed to, and to solve problems and to generally function in a way the computer cannot function.

It seems to me that those basic generic skills--you might call them knowledge-based skills--will be increasingly important in a high technology world and they may be skills that we have very grossly neglected both in our general education and in our vocational education.

Here companies are a great boon because they will free teachers from the drudgery of drill and rote and test correcting and all those things that drive you nuts if you are a teacher and allow teachers to really focus on how do you solve a problem, how do you take it apart, how do you plan for contingencies and so forth.

I second the comment about being prepared for change. Everything is obviously going to change very quickly, and the best thing vocational educators can do is to prepare kids in school for that kind of eventuality. It is preparing for uncertainty, people are not used to uncertainty; they are scared of it; and it's imperative to prepare youngsters early.

Just one or two comments about this question of how to pay for the training and retraining, although I didn't originally intend to talk about it. I think we have to be very careful, as citizens, of sparkling gimmicks that appear to solve all our problems. I am not at all sure that the immediate problem, about finding enough money to help people who are dislocated from one industry to get training to prepare them for another industry, can't be solved with the existing mechanisms we already have in place.

The simplest way to finance education is through a loan program. It is also the cheapest way because all the government has to do is guarantee a loan. The way to get more capital into a fund from which to guarantee the loans would seem to me to be very simply to allow someone who contributes to an IRA, that is an individual retirement account, to draw down "X" amount of dollars without penalty to pay for his education. If you did that--or even to make an extra contribution to his IRA which he could draw down--if you did that you wouldn't have to set up this whole new apparatus of an ITA which requires certification, administrative oversight from the federal government; that requires intervention in the programs at the state and local level and all kinds of additional red tape.

I also suggest that those who would be most advantaged by the ITA idea are those who are already working and already earning very high salaries because most people who are not working don't have the money to add to a savings account in the first place.

Finally, remember that a business now is able to deduct from its income tax liability, its corporate liability, all of the money it expends for training. To ask business to contribute more through an ITA account is just to add icing to the cake which really seems to me to be somewhat of a unnecessary gimmick.

Okay, let me wind up with the following thoughts, since I am an economic developer and not a vocational educator. This is the time finally where we have to build those links between what economic development is doing in a community and what the vocational educators are doing. We can't afford to be running on parallel tracks anymore that never meet.

The Job Training Partnership Act does present an opportunity to do that and I hope that in your communities, and in the schools that you are working in, you are seizing that initiative and building those links between vocational education and economic development because that's the way the United States will stay competitive.

Thank you.

MS. HANSON: Thank you, Gail. Francis Tuttle?

MR. TUTTLE: I want to say that I think Bill MacKinnon did an outstanding job of really tracing what has happened in trends and changes in the economy. I think as he described it for General Motors that with slight revisions and perhaps some substitutions, you could use his pattern of tracing things to almost any industry and in almost any location.

I am going to jump around and make some comments on what he had to say and what others have added to his comments. One thing, Bill, we're very glad to welcome General Motors to Oklahoma City and I'm proud to announce that we trained 4,000 of your people that went to work in that General Motors plant as it opened. I understand there's a lot of things that happened that might not make you so proud of Oklahoma, but at least the training part, I think, was relatively good.

Now, having said that, I also noticed that you made a statement about General Motors shock at the oil embargo and yesterday somebody said, every situation ought to be a win-win situation. It wasn't totally so between General Motors and Oklahoma because when the oil embargo went on, Oklahoma thrived in the hot oil economy. When the embargo worked out, our economy took a nose dive; so it isn't always a win-win situation.

Bill, you mentioned that you felt like fifth, sixth and seventh grades were good places to start bringing programs to students about careers and to help prepare them in the proper selection of courses and programs.

Well, I'd like to build on that just a little bit. I think all this fits into not only what this panel has been saying, but yesterday's panels as well. The Nation At Risk and other national studies have brought the focus on education and I would say it's a good thing because I think we have to have some dialogue about it.

But I am very fearful that all of these studies which are primarily putting the emphasis on secondary education is starting on the wrong end. Having been an educator for many years, it is my observation that when students get to the ninth grade, they must possess a good, sound, basic education at that point. Their progress beyond then is slow and difficult. The research shows that educators aren't very good at reclaiming those students beyond that point.

Just a little bit of simple, thought-provoking analysis of the situation would seem to indicate that we should be putting our emphasis on the elementary years; perhaps even pre-elementary. I think when we look at the total educational effort, things have changed a great deal. Things that these gentlemen and ladies have been talking about on the panels certainly have made this look at education so much more important.

What I'm saying is that the people have changed, society has changed, and there's a great many reasons why it's difficult to teach all students to read properly, write properly, and calculate properly. I think that we have to improve elementary education, and that is where we should be spending our efforts.

It is also my observation that most of the high schools in this country have the appropriate courses in their curriculum which relate to turning out a high school student with the kind of technical knowledge and skills that may prepare them to go on to college.

I also think in the school where students are motivated, and get support from their parents, they are getting a good education.

We have tremendous numbers of single parents. That isn't at all bad except that most of them are in situations where they work and this lessens the quality of time for that child and his/her parent. Everyone that knows anything about the learning process knows that the greatest influence for learning comes from home. Reading to those young children and being with them and encouraging them is where we really start the path of learning.

Without getting further into it, I think that the most significant thing that this country can do in terms of vocational education and training policy is to be sure that we are spending all that we can afford to spend in developing good basic educational programs in the elementary school years. When we take care of that, the secondary school will likely take care of itself.

Now, to move on, Bill mentioned another thing regarding productivity, and others have also referred to that. I happen to believe that productivity is the key in terms of economic development of this country. If we don't develop systems and targets in our efforts to help companies to be productive, they aren't going to be here. The competition, both nationally and internationally, is such that that's their survival. As government agencies, we'd better get with industry and team up and try to develop the most productive, technical, manufacturing, and information society that we can.

Now, many people talk about productivity and the only thing they think about is worker productivity. Research has shown that the primary impact on productivity is the worker, but it's more of how management treats that worker to get the productivity out of him.

My own experience over 20 years of working with industry, and we have trained the major original worker force for over 300 industries coming to our state, is that industry doesn't have the last word regarding training. You'd be shocked at how little most industries know about training their own workers. You'd be more shocked about the management systems they have in place and how they treat their workers.

What I'm saying is that I think education and industry must team up and relate to this. I think government can provide, especially small and medium-sized industries, a lot of support in helping them to improve their management systems.

In our state, we are giving some attention to that and it has been very successful. For example, one industry has documented savings of over $5.2 million in four plants that they operate in our state. That is a result of a productivity program over a period of two years.

I think that as we look at training policy--and my assumption is that this whole conference should impinge on some ideas to develop policy, especially in vocational education and training--that the state and the federal government must get in sync in terms of their thinking and they must understand each other. Presently, they don't communicate with each other very much.

The states really can't handle federal programs that do not give them some flexibility because every state, if it's worth its salt, has developed a strategy for education and training. You can't develop policy at the Federal level which doesn't take this into account.

Most Federal policy wants to compress all the States and make them jump the same hoops and they just can't be compressed into that type of a situation. Some States have outstanding programs for women. If you come in and take 20 percent of the vocational grant and require that State to spend it on programs for women, they can't spend it. It's absolutely ridiculous but that's in one of the laws that is pending right now.

You have all kinds of other set-asides. All the various groups come to Congress and sell their programs and I think that's fine. But, I think Congress has to have enough perception to provide National direction for vocational education and training which takes into account the differences in States and localities. I think that as we develop Federal training policy, it needs to be done on what needs to be done, not on how to do it or how high to jump. I think that as we get into the development or the recommendations for the development of training policies, we should take this into consideration.

As I see training, in some areas it is higher level, it's longer than the technical areas. In the regular programs, I think we are going to maybe see less time in some of the training programs. We are going to have to more carefully analyze how much time we put into training and what we are really training for.

Getting back to the question of how do we really develop the technical programs, I was glad to hear Bill speak about the kinds of programs that your company is helping to promote. There are 30 States now that have developed a consortium to develop the physics concepts which are necessary to operate in most of the major technologies such as electronics, hydraulics, instrumentation, and mechanical. We had generally prepared technicians within these areas but industry now tells us an electronic technician may also need to understand hydraulics. The equipment isn't just single-faceted.

We are now attempting to develop a curriculum that will relate to this whole area. We have identified 13 major physics concepts that these technicians are going to have to understand and be able to deal with.

I hope that vocational education is beginning to relate to the needs of the changing society. There's a great deal more that needs to be done. We need some help in getting on with the many new things that we do.

I would warn you of another situation. I have observed that when things get tough, and the economy gets bad, and industry has to get lean and mean, they lay-off their human resource development people in wholesale numbers. Actually, that's probably when they should be hiring, but that's not what happens. So for us to say that industry is going to do all the training is kidding ourselves.

I also think to indicate that industry can do it all without the support of education, is kidding ourselves. Some would like to believe that can happen. I think we will have to do it with teamwork. That brings up the question of advisory committees. I have some choice comments about advisory committees. They are the most necessary things in education. But, again, you cannot straight jacket an advisory committee. We should have advisory committees to help us do the task at hand, and not worry so much about where they came from, or where they live, or who they represent.

I think that our craft advisory committees are the most important because, if you get industry people that are willing to speak up, and you get vocational educators that train their people to work with advisory committees, things will happen. I'll close at this point.

MS. HANSON: Thank you very much. At this time, we are going to have about a ten-minute break. There is coffee down the hall, I believe, on the main floor. Ten minutes, please.

(Short Recess)

MR. RAMSEY: ...On the basis of the way it runs right now, you pay teachers low wages, so you're not going to attract the best people. The incentives for the educational system to go into this system to improve it just are not there at the moment.

So this lets me quickly get to the issue of technology because that really has got to be the focus of trying to improve elementary, secondary, whatever educational level you are talking about. The only way we are going to economically, as a country, be able to afford improvements in education, is by having the best minds devising the best education on the best computer programs available.

By bringing the level of teaching, through computers and telecommunications, up to the highest possible level of the best teachers in the country and make it available to all students around the country, you then have an economical way to get at the basic education problem.

Again, I have to agree with Mr. Tuttle; if you do not do that, what is the good of having vocational training programs with students who cannot read or write, to teach them how to push this red button and then the green button? You will always be able to get a cheaper robot to do that. You'll be able to train just about anybody to do that and it doesn't take any time.

I just want to second the point that the educational system, the basic system itself, has to be dramatically improved and there is probably no alternative to spending your money on beefing up the technological content to bring the whole standard of the system up.

I did want to make one other point in defense of individual training accounts. Gail suggests that ITAs are perhaps hokey--and I guess I am always worried that things like this are hokey, and that one more item on the agenda may be unnecessary. Gail made the point that maybe this could be done through the existing individual retirement accounts. Well, on the one hand, you will still have all the same certification requirements. There's going to have to be some system set up to be sure any money drawn down out of IRA's is going to systems and programs for retraining that are considered valid; that you aren't getting everyone going off and taking a French course in the south of France on their IRA's.

Also, the IRAs, again, are mainly operated or held by people with jobs, with decent-paying jobs right now; that's why they've got the money. Those people who are unemployed are certainly not putting money into IRAs and therefore they would still, whether it is an IRA or ITA, they would still not benefit from the chance to cope with this. This does not get at the problem of general structurally unemployed people out there today who are not paying money into IRA and would not be able to pay money into ITAs.

There again, the government programs are still absolutely essential. I think over the long term that if we are going to see the continual retraining of our work force, people who have jobs, but want to keep up with change in the economy, change in technologies, you have to have some sort of device which allows companies and individuals to have tax incentives to in fact retrain themselves.

MS. SCHWARTZ: Can I respond to that?

MS. HANSON: You certainly can.

MS. SCHWARTZ: Let's take our last comment first. It is true that IRAs, just like ITAs, would benefit only those who have the excess cash lying around and I think that's a relatively small proportion of the blue-collar work force and obviously none of the unemployed or those threatened with unemployment.

For that reason I think that we do need to have a permanent fund to finance retraining, and I think the way we should do that is through an established mechanism that already has the oversight capability and the collection capability. It would seem to me that there are two possibilities there. One is the Social Security system and we could have a surcharge on the Social Security tax, of a very minimal amount, to create through payments by both employees and employers, that could be set aside only for training.

The other option is the one that I disfavor since I run a small business and can't afford to pay the payroll tax I pay now, is through the unemployment insurance tax. My preference would be through the Social Security mechanism. I think we still will have the problem of people paying into it only after they start to work and we wouldn't have a fund there to provide pretraining; but I think we would account for almost all of the people who are thrown out of work or have to upgrade their skills on the job.

I don't want to belabor this too long, but just on the question of control, I don't have a heck of a big concern about whether somebody takes their three thousand bucks and go to the South of France. I think you have leakage in all of these systems. I think most people who have money to put into an IRA put in for their retirement and therefore they wouldn't endanger their retirement fund for frivolous reasons. I think the cost of exerting the control probably outweighs the benefits of trying to control the leakage; but in any event, you can argue that for a long, long time.

My basic point about how you finance training is use the simplest mechanism and make it a mechanism that is available to everybody regardless of their income level and make sure that you are not giving an extra break to business who we are already relieved of paying 90 percent of their corporate income tax, which is going to be more profitable because of technology.

MS. HANSON: Bill MacKinnon?

MR. MACKINNON: Jean, when I came here I had the distinct impression that what I ought to be doing is spending a couple of days sitting here listening and taking notes rather than giving a talk; I thought I ought to be on the receiving end of the title of that book that was written by a member of the Sioux Indian Nation in the 1960s, what was it, We Talk, You Listen.

I found the comments of the four panelists fascinating and, despite the fact that they are far more knowledgeable about the field than I am, I saw several familiar issues in Dennis's comments. I couldn't agree more with his comments about the growth in computer programmers. Our company and our information systems people see, not a mushrooming of computer programmers, but a dispersal of those skills into each desk top and a growth in the use of users of that equipment but not of programmers as such.

The math skills and writing skills of people entering the work force, we see problems in our company as well as in your laboratories and the need for flexibility and the realization that training and retraining is not an event, especially at the beginning of a person's career, but throughout it.

I think a point that Gail was making in talking about the need for vocational educators to stress flexibility and to confront change throughout their career is absolutely crucial.

Doug's comment about, the good times won't necessarily last, I think is also right on point. The profit levels at General Motors, a net income of $3.7 billion in 1983, is certainly a far better scene than the loss of almost a billion dollars in 1980; but our profit margin for 1983 was only 5 percent of every dollar of sales. Only 5 cents of every sales dollar flowed down into the net income picture and that is not satisfactory.

The apparent prosperity of last year, and perhaps this year, hides, masks, some very serious problems including the perceptions of our own employees. I think sometimes they tend to see gold flowing in the street when in fact below the surface is still that $1,500 to $2,500 a car cost differential with the Japanese that has to be approached.

With respect to Francis's very perceptive comments, the issue that productivity is not just a problem of the worker, but is very much enveloped in how managers deal with those folks is right on and at the heart of the quality-of-work-life concept that I've tried to indicate is alive and well at General Motors, not because of a Japanese thrust, but something that we took on with UAW, actually negotiated it into our agreement with them in 1973, is at the heart, of I think, our recovery and our progress.

You won't find General Motors advertising that like some of our domestic competitors. We do not think interpersonal relations and sensitivities thrive well on full-page ads; but it is alive and well and we have at least a ten-year head start on some of the other U.S. producers, but I don't think you're apt to find us advertising it.

MS. HANSON: Okay, thank you. Yes, Francis?

MR. TUTTLE: Just an idea in regard to the thing you two were discussing about some type of a training account. Why not use unemployment insurance and require training if they are going to draw unemployment. Would there be anything wrong with that? You know, if we are going to pay them for unemployment, it also looks like we'd have some justification for requiring at that time the quality time to get them ready for either other employment or some other kind of job.

That's one possibility in my opinion. It seems so ridiculous to me that we even have States that will not allow a person on unemployment to be in training. How ridiculous can we be.

MS. HANSON: Okay, thank you, Francis. I believe we need to take a few questions from the audience, too. Would you identify yourself?

MR. AUERBACH: I'm Jim Auerbach and I am with the AFL-CIO's Department of Education. I was thinking that I might say something while the speakers originally presented their remarks, especially Bill MacKinnon's stimulating remarks about GM, but I wasn't sure until the remarks about gold in the streets and the attitudes of employees, which I think requires a response.

It was interesting listening to all the structural changes that are going on in GM and combining that with Douglas Ramsey's remark about the very narrow window of opportunity and Gail Schwartz's remarks about the contingency plans for GM to lay off 86,000 workers in the next few years, and the by now also famous or perhaps infamous memo about that which says something about sensitivities too. Perhaps we need more full-page ads about interpersonal relationships; I don't know.

What came to mind in listening to all of that is that we have sacrifices made by workers in the automobile industry during the recent recession, which is still going on in the minds of many workers, despite all of the news about the recovery and we have a narrow window of opportunity which, despite the fact that we have huge profits now being earned by the automobile industry, I guess that the implied message is that workers have to understand that's just a narrow window of opportunity and therefore don't try to make up for those sacrifices being made because by '85 or '86 there'll be a new recession when they'll continue to sacrifice, I guess. That concerns me. Attitudes like that.

It seems to me that we profit much more by cooperation and the very good joint programs of training and retraining that have been agreed to mutually and in a cooperative atmosphere between UAW and Ford and UAW and more recently GM.

There are some wonderful ideas there and I hope that there is a great concern on the part of GM--I'm sure there is--about those 86,000 workers and what is going to become of them--not just statistics, but human beings--workers with careers and families and what is to be done about them as well.

I'd appreciate it if Bill MacKinnon could maybe expand on some of the training and retraining for those kinds of workers and the plans GM has.

MS. HANSON: Thank you.

MR. MACKINNON: I agree very much with your comments about the value of cooperation among our employees and among the unions that represent some of them. I feel a little bit badly but it just may be, to use a phrase of my talk, it may be my competitive urges when you say, "more recently General Motors." I think cooperative thrusts in the auto industry between unions and management started at General Motors in the late 1960s due to the--

MR. AUERBACK: I'm speaking specifically about the--

MR. MACKINNON: --I see, but cooperation between us and the UAW has been alive and well for quite a time, largely due to the brilliance and sensitivity of people like Irving Bluestone who was the Vice-President of the UAW in charge of the GM Department and his successors and I'd like to think some of our own people also.

We are very concerned about our employees. Gail, you and this gentleman may know more about contingency plans than I do. I guess I just, I'm just not informed or involved in that. My concern is principally the salaried and managerial work forces but we are very concerned about our employees and our principal thrust--notwithstanding probably income security plans for the unemployed, unmatched anywhere in North America--our principal concern is jobs.

So for that reason, Francis, in your State, we're very concerned that before we start hiring strangers into General Motors, that we offer available assignments at the Assembly Division's Oklahoma City assembly plant to those GM employees in other parts of the country as well as perhaps Oklahoma who are out of work.

Our principal thrust is jobs and even though we have extremely attractive and extremely liberal compensation arrangements that have been negotiated with respect to our union represented people, and extended by policy to our nonrepresented salary people, our major thrust, out of compassion and a feeling that that's what we ought to be doing for people, is employment so we have extended job offers to people that sometimes has implicit in it the need to move to a different State or a different community.

It's been a source of some distress to me that we would offer a job opportunity to somebody with a total pay package of compensation and benefits in excess of $20 an hour and then be vilified for it by local newspapers. We are concerned about people and you are well to raise that point and it is very much at the heart of the way we think we're doing business and what our relationship is with our people and the unions that represent some of them.

The training-retraining effort--perhaps the California experience is the largest, most public example--that was a situation, sir, where having closed two assembly plants because of market reasons at Fremont, California, south of San Francisco Bay and at South Gate near Los Angeles, we set about with the UAW, with the State of California and with the Federal government to launch a $10 million training-retraining effort, the thrust of it being demand occupations to train people, not in things that they necessarily would have be inclinded to follow by personal interest, but things that would end up with real-live types of assignments.

In that respect, Gail, I agree very much with you. There's a data information gap in terms of not only who's out there with what skills--we think we know that in our work force--but what's out there in terms of demand occupations. There is a need for better data on that.

We have concluded that venture in California and thousands of people were trained and matched with employers during the course of that. It didn't always do as well as we would have hoped, but I think it did better than perhaps we had before and we're picking up that same thrust in Michigan, in Pontiac and Flint, again with the cooperation of the UAW.

MS. HANSON: Thank you. I think we have time for one more brief commment and--one? Okay.

MR. COLE: Jerry Cole from the National Institute for Work and Learning here in Washington. I wonder if the panelists, and perhaps Mr. Tuttle particularly, could comment on the connection between career development occupational exploration and skill training.

We know that when we're dealing with displaced workers, and adults generally, that there is almost nothing worse than training somebody for a job that doesn't exist; that the discouragement that arises from that experience of investing your time and energy and training and then not having a job that is going to be at least a substantial part of your career is devastating. It's economically wasteful and so on.

This same rationale, I think, probably applies to young people going through school to train them for things that are not going to be really of great use to their lives. It is perhaps not as personally devastating; they're younger, they have more flexibility; but it is still a waste of resources and it is discouraging.

Where does the connection between occupational exploration, information exploration, and an individual's choice fit with the traditional vocational skill training. What's happening--if it's even in Oklahoma or other States--what's happening now to make that a more efficient, more humanly sensitive kind of system, and are we in a position where we can begin to judge when it is appropriate to have skill training. Should there only be skill training when we know of an exact set of placement opportunities?

I'm addressing it to Mr. Tuttle, but if someone else would like to deal with it?

MR. TUTTLE: Well, I think you certainly have brought up a very significant problem that relates in our State and most States I would say. We perhaps have less than desirable career information systems that really tie the ability and interest of a worker to the availability of a job. We have attempted to and have developed a career education system which is updated annually and provides information to the schools.

The problem is that the schools don't use it very well. In order to relate in a better way, we have even developed career vans which have two trained people on hand to give the educational picture. The career van moves from school to school with information to help students. We cover eight counties in the southeast part of our State with this type of a mobile career training program.

I think that in that instance it works very well. We've also tested it in an urban situation in Oklahoma County where we have also developed the same aspect and that has been operating for the last couple of years. The problem with it is that it is expensive and whether we can get the funds to extend it to other sections of the State is problematical.

The counseling, guidance, career information system, and working through educators is a very difficult problem. I've been tremendously disappointed that the school administrators in this country either don't care or don't want to bother with it or for some reason, really don't promote that aspect of education.

Now you relate to them in terms of displaced workers, adults, and I think that the vocational schools have to develop a system where they can relate to the adults and I think generally in our State we've done a better job of that than we have with the public schools where we can't control the situation.

Certainly we need a lot of interest in that area.

MS. HANSON: Okay, thank you. I'd like to thank our panel members; our time is up. Dr. Tuttle, Dr. Schwartz, Mr. Ramsey, Mr. Bowden and Mr. MacKinnon, I'd like to thank you very much and thank you audience.

At this time I am turning this session to our NACVE council chairman, Ed Miller.

MR. MILLER: Thank you, Dr. Hanson. Because I cannot be with you this afternoon at the closing of this session, I would like to take this minute before I introduce our next speaker to publicly thank again all of those responsible for putting this program together these past two days.

The NACVE members, Dr. Fellendorf, Dr. Broussard, Dr. Dwyer and Dr. Hanson, a very special thanks. To the NACVE staff, Executive Director Griffith, Ralph Bregman, George Waldroth; to those at the National Center, Dr. Taylor, Dr. Lewis; and to of course the NCEP staff and to all the presenters, and to you, the audience, a very special thanks from NACVE and all of us for making this program a success. I'm sure we will be eager to receive the report of the conference and to give it as much visibility as we can.

I became first acquainted with our next speaker as you probably did if you are my age and or older--and I'm sure no one is any older than I am--but we first became acquainted with our speaker through television, and I can remember many nights of watching NBC news and seeing Bob Goralski standing in front of the White House through snow and sleet, giving the report of the activities there on the NBC news from the White House, State Department, The Pentagon, and the Energy Department.

I became personally acquainted with our speaker when I first asked him to address a national conference of the Future Business Leaders of America and I can truthfully say that I don't think in our 40-year history of Future Business Leaders we've ever had a better keynote speaker than Robert Goralski to stimulate the people thinking about topics of the day and thinking about the future.

It has been said about Bob Goralski that he is more current and more informative than the morning's news stories. Drawing upon his 15 years as correspondent with the networks and his travel to just about every country in the world, 40 countries to be exact, he brings to us a background and experience that we are very pleased to have as a part of this meeting.

On his topic of public policy and communications, I might say that I know of fewer times that my wife and I have enjoyed social time anymore than listening to Bob tell about his experience during World War II. He is author of the World War II Almanac that has been said to be an invaluable book to students of military history and fascinating to the general public. If you don't have it in your library you should, because if you ever play trivia games you certainly get to use it as your source, as we do.

I am especially grateful to Bob for accepting the invitation to address you this morning because he as, as I am, find ourselves traveling so very much. He just returned from Houston last night and is ready to leave again, as I am, this afternoon. Would you join me in welcoming Bob Goralski.

MR. GORALSKI: Thank you, ladies and gentlemen. I noted in the program that I was described as orator or scholar. I'm very flattered by those descriptive terms. I suppose if I had to name a particular thing that really would apply to me more directly, I guess I'd call myself a media junkie; one who absolutely loves the smell of a book, open it for the first time, or newspaper or magazine and television as well.

I'm somewhat apologetic about television, having made my living in television for so many years, but I do feel guilty about watching the screen. It does seem to be a waste of time. What I do, I must tell you, particularly on Monday night football, when I listen to Howard Cosell, I take notes, and it seems to justify watching Monday night football. I have a big stack of Howard Cosell; it justifies the three hours on those Monday nights.

I am going through withdrawal symptoms even now, it has been so many months since we had our last Monday night football game, but I recall very vividly not only Monday night football but the world series with Howard. During the world series you were caught between Baltimore and Philadelphia. He came out with a marvelous line in which he said that if the Phillies are going to win, as any dictionary will tell you, the Orioles will have to stop Mike Schmidt.

I went to Webster's Third and it did not tell me anything about Mike Schmidt, or Baltimore or Philadelphia. Then he came out and there was a line about Bowie Kuhn, who was stepping down as commissioner of baseball, but Howard informed us that Mr. Kuhn lost by a huge minority vote. I didn't quite understand that one, but the marvelous--it was the end of the football season--when he said to those who love nostalgia one must now look to the future. Don't try to figure that one out.

It is fun to listen to Cosell, but I mention this and I use this really to illustrate one of the problems; that we are worried about educational problems today and the fact that we have a growing number of functional illiterates. Our SAT scores are going down and the problems that you're concerned with here, how many more children are exposed to Howard Cosell than good teachers. Certainly it has a tremendous impact on how we all think.

I mention television particularly too, although I have to apologize for watching it, it has some excellent programs. Last night, I could hardly wait to get back for Riley Ace of Spies. It's not all bad.

But the fact is that television in the process that I am talking about, public policy, does tend to have a negative effect in determining what we do as citizens and how democracies are run. There's no politician certainly who is not a follower of public opinion.

Politicains are not leaders. J. F. Kennedy wrote a book about Profiles in Courage in which he spotlighted a dozen U.S. Senators who bucked public opinion and then Senator Kennedy could only find a dozen in the history of the U.S. Senate. So, politicians follow public opinion, and how is public opinion created?

Over a period of time, we as individuals, voters, constituents were not that concerned in many areas of public policy. For instance, it was only in 1969, in 1970, that for the first time people in the United States worried about strategic defense. The antiballistic missile system was debated as a matter of national policy. That was the first time in the history of the country that we did that.

Foreign policy items are now really considered by the electorate more than ever in the past. It is a far cry from Walter Lipmann's book, Public Opinion, in which he argued very convincingly, and for the people in the 1930s approvingly, that foreign policy was too important to be left to the electorate; that you elected an executive head, the President of the United States; he appointed a Secretary of State; and the elite that he appointed took care of foreign policy matters; that foreign policy was too important to be left to referenda.

Now we have Cambridge, Massachusetts declaring itself a nuclear free zone. We are engaged in not only high technology issues, a period of communications revolution, but we are concerned about more complex topics--the economy which is never a matter of public debates; physical policy; monetary policy; energy, environmental problems. These are matters more and more heard of in this participatory democracy.

We are individuals, constituents are involved in more areas. but what do we know? I think it is one of the analomies that in this communications revolution, with far more opportunities for absorbing knowledge, we are absorbing less knowledge and are we making the proper decisions? Dr. Tuttle mentioned a minute ago that example of unemployed being denied access to retraining programs--bad policy? Yes, I suspect so. The continuation of New York subway fare at 5 cents--bad policy? Very, very likely, in retrospect.

A lot of things have happened. The emphasis for instance in being concerned about the number of victims of highway deaths, up to 55,000 a year for a long period of time. We focused on what we thought was the primary reason for a long period of time, mainly defective manufacturing, either in the vehicle or the tires. Whereas in fact until quite recently, we refocused attention, and blamed the person behind the wheel, the inebriated individual; the drunk driver was responsible for 85 to 90 percent of the deaths that we suffer each year. But there--the misemphasis, sometimes total lack of emphasis. Well, how did we get to this point in the era of a communications revolution?

Part of it is television, going back to Howard Cosell, and the fact that more and more Americans do watch the screen. According to the latest information, the figure keeps going up, 70 percent of the American public today says it gets its news primarily from the three evening television news programs.

That's an appalling thought. It was appalling when I left television news a few years ago, when the number was smaller, but each year more and more people are getting their news from television. Television is by far the most credible of all the media. More people believe a television newscast than they do newspapers, books, magazines, and they regard television news as very objective.

The fact is that television news is not objective. This is not a criticism of television news. It is the technical constraints; the inability to cover a story means that it didn't happen. For instance, there is a problem with ethylene-dibromide today, EDB. There is no war in Afghanistan. There is no war in Campechea. There is no war in Northern Chad, because television is not reporting it. These wars simply do not exist.

Fred Friendly, the former President of CBS news, was certainly absolutely right when he said that television doesn't tell you how to think, but it tells you what to think about. Until television decides what is a problem, it is ignored. Until such time as a problem is identified, it does not become a public policy issue. Generally, because of the time restraints, television's longest spot generally is not more than three minutes, a very brief period of time, 180 seconds. That's a long spot; twice as long as the 90-second spot which is the average. In 90 seconds or 180 seconds, you can't cover issues of national importance. It is drawn in extremes. It is good guy/bad guy without options, without consideration. This is how we Americans are absorbing our news and deciding what is a problem for the country and providing very limited options for solution of those problems.

We are not a reading public. We are less and less a reading public. Each year, six metropolitan daily newspapers close down in this country, six major dailies each year. Average newspaper circulation, on an annual basis today, is the same as it was in 1960. Our population has grown since 1960 by about 25 percent and therefore newspaper circulation has actually declined; readership has declined by 25 percent.

We see that people are not reading newspapers. They are looking to the newspapers, again, as headline services; and the most prosperous newspapers today, because one is the newest endeavor in the field of communications, USA Today. A very sophisticated survey was done by Gannette Newspapers to determine what kind of newspaper the American people wanted. USA Today is the result, and I'm not being critical of it; it is a handsomely done, typograhically perfect paper. It makes sense. It is bold; it is full of color; but no story is more than 300 words long, except for the cover story, one story per issue, which generally goes to about 600 words. It is very brassy in topography. It is eye-catching; graphs, charts, pictures, all in color, to attract readers.

There was a chart in last week's paper, maybe you saw it, page one, Cucumber Production by State. It looked good. Were you anxious to know what cucumber production was? Look at the back of it, the back of section one, the weather section, an enormous map; it's not very good meteorologically. I have yet to be in a city where it was snowing or raining that it was predicted by USA Today. But rather it is an imitation of television--the weather page. It looks like Willard Scott on the "Today" program. The whole generation of kids are growing to grow up thinking that Maine is purple and Florida is yellow. They'll be disappointed to find out otherwise when they get there.

As a matter of fact though, it is this imitation of television which is rather interesting, because USA Today, after polling and doing this sophisticated research, found out that people really want a television screen transposed to print, so individuals could read it on airplanes, get the scores, do everything in rapid-fire order; and what they sought to do then was to transfer television to print. They succeeded admirably, even to the point where Gannette Newspapers, when they order the dispensers you see on the streets, they told the designer to have that vending machine look like a television set; and indeed it is, a marvelous replica of a television set.

The other successful newspaper operations in the United States today are those papers which have been acquired by Rupert Murdock, the Australian who has a tremendous sense for a bottom line that is profitable. He has turned a Boston paper, and most recently a Chicago paper, into perhaps profit earners. How has he done this? Well, it's journalistic sensationalism. It's the kind of thing that--Mike Royco said that no self-respecting fish would be wrapped in a Rupert Murdock newspaper.

It is happening. We are going along with wingo games; we as readers, are going along with again the sensationalistic type headline, where you're not going to to find out what is happening in Washington, or in foreign policy matters, or not much on the campaign even as a matter of fact. You'll find very little in terms of political reporting if you look at the headlines of the Sun Times. Stories are not very great--they are all abbreviated--basically because the formula for success seems to be there. Over simplify; do it in headline form. They're caricatures of stories and they are not journalistic stories at all.

Magazines--another great source of information--where in the past when we had fewer areas to consider as public debate matters, we read more magazines. Now, there are more magazines today, let me hasten to add. There are probably about 14,500 periodicals printed in the United State today. There were only 10,000 in 1960; but the proliferation of magazines has been basically the school of self-gratification.

These are personal hobby, how to keep trim, how to lose weight, personal investment type magazines, a lot of computer magazines, and they're good, I'm not berating them at all; but they are highly specialized. A lot of people have said they are basically designed to appeal to the "me" generation; a lot of skiing magazines, hobbies, activities, leisure-type magazines, are gone, not that they were necessarily the best, but gone are Colliers, The Saturday Evening Post, alas, the Saturday Review of Literature is no longer what the Saturday Review of Literature was.

Those that do survive, the magazines that really provided, and still do to a great extent, a broad view of problems, and identify the problems long before they become popular on television.

Look at things in more detail. The Atlantic, Harper's, Variety, The New Republic, Nation, they are all in trouble. They are having a difficult time surviving. Newsweek and Time, if you will, are having a difficult time surviving. Time probably could not afford to put out the publication. It does without the fact that it is getting most of its money from HBO. Newsweek probably could not exist but for the fact that it is part of the Washington Post organization, which probably could not exist but for the fact that it holds tremendous television holdings. The profits are not in the print media. The profits are in the electronic media.

Books, we are certainly reading fewer and fewer books. Ed mentioned a book that I wrote a couple of years ago, and that year, I think it is rather revealing, Putnames came out with that last book of mine in 1981. It was one of 250 books published by Putnams that year. Last year, Putnames came out with 70 new titles, as opposed to 250 new titles in 1981. That means that in 1981 they were coming out with a new title virtually every work day. Last year, they came out with a new title of little more than one a week.

What the publishers are learning as a part of this communications revolution is that when people do pick up a book, it is more likely to be the sex thriller, detective-spy thriller; it's going to be the book that is going to be a best seller. Robert Ludlum s new book, "The Anquitane Conspiracy," I think it's called, was advertised in the New York Times yesterday with a first printing of 550,000 copies.

Believe me, I speak not in jealousy--yes, I do speak in jealousy. I can't imagine the collected works that I would ever do, you know in how many languages, approaching, that first addition of a Ludlum book. I am very humbled by the entire publishing business. I was not on the best seller list with any of my books, but I was one time--it was truly humbly--I was right below the best of Bulgarian science fiction. That is a fact.

We don't read books that are really intellectually stimulating. We find that the sales of books that are pushed by the publishers are those that promise to become best sellers. You can become a best seller author today if your publication merely hits 85,000 in print in hardback edition--only 85,000.

The saddest part of all, The American Booksellers Association last year did a study and found out that 50 percent of the hardcover books published in this country purchased at bookstores are not read. We used to laugh about coffee table books; we find out that 50 percent of our books are coffee table books. No coffee table is that large. But then we don't buy that many.

We are moving away from a reading, knowledgeable public. We want, apparently as Americans, we want television in its oversimplified form. We want imagery in politics.

What has happened really because of this communications revolution is that we've seen the end of the traditional political parties. The political parties have been replaced by individual campaigns, run by individual contestants, projecting images. About 90 percent of the campaign costs of any candidate's campaign today would generally go to television. Gone are the door-to-door precinct workers who canvass areas; gone are the days by in large when you had precinct operations, ward operations, with the political party as the prime mover. It is now the advertising director the sleek Madison Avenue type who gets up a television campaign going to project the image. Issues more and more have become not the central themes of campaigns, but it is what the projection is of a particular candidate that people decide on to vote.

Now, a lot of people are not happy with this. A lot of people don't vote at all. A great deal of citizens--with negatism throughout the country--we do not participate in the electoral process, as indeed most of the nations of the West do. Our turnout is extremely low, as you know. There is growing concern, particularly among the young, who feel that the system simply does not work and they do not join in the electoral process at all.

What we do, as we have elevated the area of participatory democracy, getting to more complex issues, moving into areas that were not of concern to the average voter, the citizen of just a short time ago. And yet even with this tremendous bombardment of opportunity we have, for means of communications with what was impossible only 10 or 15 years ago, and now we are talking about cable, with 120 channels available to us instead of the four or five which most cities have.

If you've seen the quality of prime time television of late, with three networks trying to keep audiences happy at the level at which they now do, do you think the quality of programming will improve with 117 more channels? Where is the creativity going to come from?

I suspect what you will get more of in terms of cable television, is a lot more sports, a lot more pornography, maybe in the case of Cosell there's both together at one time. But the notion that more communications channels opening up to us is going to make us better, I stongly doubt.

I am very concerned, here in Washington, of committee hearings where, if the television cameras are there you are going to find 14 senators lined up, and as soon as the lights go off and the television cameras are torn down, generally around 1:30 or 2:30 to make sure they catch the evening news, senators are no longer there and the junior member of that committee will remain as chairman.

It is more the politicing of it all. This is the essence of politics. I am not degrading the system; but the fact is that the politician who is going to follow public opinion and not lead is constantly going to be aware of how public opinion is formed. I think this is one area of social science research that is missing, is how public opinion is formed.

From every basis that we have now, it is the oversimplified type of communications we are getting via television news, the oversimplified kind of newspaper-type of reporting we are getting, particulary with USA Today, with the Rupert Murdock newspapers, and where the extended-type coverage is no longer available, we are falling into the trap of basing our decisions and determining what the problems are, on rather, sometimes flimsy, sometimes nonexistent evidence, no room for debate, no time to consider the options, no real opportunity for providing input into what we want to know before we can decide.

We are not asking questions. We are now told very roughly through television and through the oversimplified forms, the projection of images, this is a problem and clearly the way it is stated, in oversimplified form, these are the solutions.

It is extremely difficult to imagine that it is going to change in the future. I suspect that, and again I am presumptious to ven discuss the problems of education with you, but until somewhere along the line we convey to those in our school systems, our students, that what you see on television is not the truth; it is not objective; it is not necessarily where we should be headed or is it a problem; but there are other opportunities for finding out what is important, to determine what the options are, where we should be going. To get children to read again, I suppose, is the basic problem.

You've seen the statistics on the number of hours that a child spends in front of a television set, compared to the number of hours he is in a classroom; they are rather appalling. It is the children who are moving more and more, not as beneficiaries of the communications revolution, but really become further disadvantaged by being hooked further on what is available in more simplified form.

I really should end because--I have a tremendous advantage--I am not of the high tech age myself. I recently bought a new watch to replace the standard type. It is a digital watch and I can't read it without my glasses. I think it is pretty close to 12:00 o'clock, so I think it is a pretty good time for me to wrap it up. If we have any time for questions I would be happy to answer them.

Great. Thank you so much. I enjoyed being with you.

MR. MILLER: Thank you very much, Mr. Goralski. I'm sure it wasn't for our lack of concern that the questions didn't arise because I can think of dozens myself and I think that the timing of this meeting is such that you're sort of impacted by the timing of trying to conclude. By the same token, I think this afternoon we are going to have an opportunity to discuss, both issues that you have raised which I think most of us are sensitive to, and how this can impact upon the roles of the various organizations and committees that have sponsored this conference and which are charged by the mandates from Congress or the public to address these issues as they relate to education and work.

We are going to break now for lunch. We will resume again at 1:00 o'clock. I would like to publicly thank the four students that have joined us today. If they are in the audience, I'd like to have them stand when I call out their names, because we have had student help from several organizations throughout this conference. From the Future Business Leaders of America, Angela Walker; from the Office of Education Association, Mike O'Brien; from the Vocational Industrial Clubs of America, Wayne Hartman; and from the Health Occupations Students of America, Edwin McBeth.

I think that we all recognize that many of the things that we look to the future and expect and hope for the future are in the hands of young people like this. We welcome them and enjoy them, and hope they will participate and continue to do so.

So, we will adjourn now, and the essense of what we have heard and how we are going to try to put that together will take place at 1:00 and I really encourage and hope that all of you will be here. Perhaps we could even, if you don't mind, arrange to sit a little bit closer to the platform because we hope to have a lot of interaction and framing of ideas and possibly positions that various groups and organizations can think about presenting.

So, thanks again. We appreciate your participation.

(Recess for Lunch)

AFTERNOON SESSION

MARCH 16, 1984

MR. MILLER: We are going to get started again. This is, of course, the closing session of the two-day event and the purpose now is to review the policy implications for vocational education and training that we jointly see in what has transpired over the last day-and-a-half. No formal resolutions going to be taken, we don't have that kind of body constituted here. I can assure you, however, that there are a lot of people in this room that have opportunities to reflect and extend what's discussed and, if not concluded, at least what represents a sense of this meeting with folks who do have responsibilities for making decisions and policy for this field in our country.

So, on that basis, I'd like to introduce the panel chairman for this afternoon and she in turn will introduce as necessary the rest of us on-board. Mrs. Joanne Dwyer, who is a member of the National Advisory Council on Vocational Education; has been counseling senior high students for over 12 years; and she has owned and been on the board of directors of three major businesses; so she represents both business and education. In her spare time, Joanne has served on the local Salvation Army board and has taken university-sponsored vocational education study tours, one of them in particular to the Soviet Union, and perhaps in the course of our discussion, she will share with us some of the things that she learned on that expedition. So, Joanne?

MS. DWYER: Thank you very much. Good afternoon ladies and gentlemen. It is really a pleasure to have you here with us as we go into our final session on what I am sure you found is a very informative and stimulating two-day conference.

I'd like to introduce you to the panel members, or reintroduce you I guess to most of them. I'm sure you've had the opportunity to hear their expertise before in these two days, but just to get you a little bit acquainted again, we have Dr. Jean Hanson, from Convergent Systems, Incorporated, in St. Paul, Minnesota.

Next to her, and you heard this gentleman this morning, Dr. Francis Tuttle; Francis is State Director, State Department of Vocational Education, Stillwater, Oklahoma.

Now we have a newcomer to introduce to you, certainly not a newcomer to vocational education, but he has not been on the program before in these two days, and we are delighted to have with us this gentleman, Wallace Vog. Mr. Vog taught agriculture and he later worked at the New York State Education Department in the Bureau of Agriculture Education. Wally recently completed two years as President of the National Association of Executive Directors of State Advisory Councils on Vocational Education; that's quite a handle. Now he is the Executive Director of the New York State Advisory Council on Vocational Education from Albany, New York. Welcome aboard.

Next to him we have another friend of mine, another member of NACVE, Dr. Vernon Broussard, Associate Professor, University of Southern California, Los Angeles, California.

And of course you have heard from the gentleman who deserves much of the credit for having this conference put together and all the work that he has put into it, we have George Fellendorf, President of Fellendorf Associates.

I would like to remind you that we will have a question and answer period at the end. We want you to become involved. We really do. This is your chance to speak out and our chance to listen, and we need your questions or your comments.

Panel members, I would like to remind you that you have approximately five minutes to present your reactions, your comments, your general observations regarding the topic for right now, analysis of policy for vocational education and training. To make this as fair as possible, I am going to call upon these individuals in alphabetical order. So, we are very happy to start with Dr. Vernon Broussard.

DR. BROUSSARD: Thank you very much. In terms of five minutes of summary of all that I've heard in the last day-and-a-half, the implications of demographics, the economy, et cetera, and the policy implications for vocational education, the focus at this particular time, in light of the high percentage of growth in the high technology fields, those occupations according to the Bureau of Labor Statistics (one can certainly question those when one looks at the assumptions on which they are based and the kinds of statistical analysis that is used, which is the traditional regression straight-line analysis) that if they were indeed even partly correct, we can expect a high percentage of growth in those areas.

In terms of the total number of jobs, those would be less. I think that if you want more specifics, I would suggest, that you take a look at the assumptions that were used by the Labor Department in its publication Occupational Projections for Training Data, 1980 Edition, The Bureau of Labor Statistics.

I think that in terms of policy implications for vocational education, we want to talk about that to include the concept that change is part of life. It is not static. That was pointed out by one of the panelists yesterday; in my opinion we need to empower Americans, and particularly our children, to master change in life. I think that it is insufficient to mount massive training programs each time the occupational picture shifts. I think that this essentially sets up individuals for repeated "shock learning" and it is very, very expensive.

I think that most of us--support the needs for the basic general education requirements of good communication skills, reading, writing, listening skills, good analytical skills that are developed in mathematics and some of the related sciences, the arts, the humanities and the caring and love, the unconditional love--we need to emphasize these more because I think that that is something that is tremendously important. The hidden skills that are, that lies in the will of each of us. I think that those are the skills that need more emphasis in the curriculum.

In summary, I would say that the policy implications are essentially twofold. First, while we need to continue our efforts with regard to maintaining our preeminence in the area of technology, it is important to focus on those "basic" skills, and it would be redundant to mention those again. Second, it is of equal importance to focus on those hidden skills--the skills of self-confidence, the skills of persisting, the skills of thinking for oneself, the skills of loving and caring for others--recognizing that we live in a global world, and a truely global economy.

Thank you very much.

MS. DWYER: Thank you very much, Dr. Broussard. And maybe you will have a little more time at the end to tell us just a little bit more about it. And now, Dr. George Fellendorf.

DR. FELLENDORF: I am going to do something that I've never done before, sitting on a panel. I am going to pass my five minutes and hope that that five minutes can be used by the people in this audience, some of whom I know by reputation, others I don't know except by name, but I'd like to hear from them. So, if I may, Madam Chairman, I'd like to suggest that the five minutes that I had be devoted to listening to some of the input from the audience.

MS. DWYER: Thank you very much, George, and I am sure that they will honor you by doing just that, won't you audience--yes. Now I'd like to introduce you to Ms. Jean Hanson.

DR. HANSON: Thank you, Joanne. George, you kind of caught me off-guard on that one, I'll tell you. I think as we are looking at policy, one of the things that we as a National Advisory

Council, and that I in my more recent endeavors have dealt with, has been legislation, Federal legislation and State legislation, as it affects vocational education. I think that's an obvious thing that we need to deal with as far as policy.

Beyond that, I think that we as leaders in vocational education, or as individuals that can impact vocational education, need to look at how can we help to implement changes and attitudes in parents, in boards, in communities, and so on, so that vocational education is not regarded as second-class education for other people that just kind of can't make it. I think that in my experience that that is an attitude that is pervasive in many people and in many situations.

I guess the other policy area is in the area of having vocational training that is realistic and that is current. I don't think we can be in a position of saying that since something was good yesterday that we should continue in that way forever. There have been some "old line" vocational educators that have been accused of that.

Let me tell you one little story and this is about schools--I guess. I called home last night and they said, "Well, we've kind of got a problem," and I said, "Really;" they said, "Yes. Billy is here again." Now Billy plays hockey with my son; Billy is like 13-plus and my son is 14. So Billy should be in 8th grade, but Billy is in 6th grade, because Billy has been put behind two grades in school. You know why Billy is at my house all the time? He comes over there right after school every day, and he stays until he gets kicked out at 9:00 or 10:00 at night, because we have a computer and Billy is on the Apple computer for as many hours as we will let him be there. Now, that tells me that we are doing something wrong in the way that we are teaching kids like Billy because different people learn in different ways. I think that there is a good indication to me that the Billys of this world can certainly learn from something like the computer that is of great interest to them.

That was one of my first supporting points, different people do learn in different ways and we need to make our system fit those kinds of things. I have just a few other things that I think we might want to use in our considerations.

We've talked a lot about service occupations and about high technology and we do need to remember that we need to train people in some basic skills areas, and the basic skills do include the ability to make change; the ability to perform well in the jobs that may be minimum wage jobs; the ability to read, to write and so on; and that all students will not get those in our normal school setting. Someone made a good point--I think Dr. Tuttle made a good point--this morning about the elementary school and I think that has a great deal to do with what we can do in vocational training at the high school level and beyond.

We need to instill a feeling of pride and of quality and of the goodness of work in students. My second point is that students feel that they're kind of second class in some of the thing that we've taught and I think that's an area we really need to work on.

We need to make school a more successful environment for students. We need to look at the way we are teaching the students in vocational education. You know when I rode out here on the airplane, I didn't want a mechanic that got "D's" to be the one that checked my airplane. I wanted a mechanic that had learned all of the competencies; that person needed to be a mechanic, and to be an "A"-level mechanic. I think that we need to look at that. That's part of the school system that I think has been very harmful to some children.

I guess, lastly, we need to emphasize the area of adult retraining and of adult upgrading and moving up the ladder.

MS. DWYER: Thank you, Dr. Hanson. We will now hear from Dr. Francis Tuttle.

DR. TUTTLE: I heard a rumor this morning that this session was going to be closed so I got some of my licks in this morning on things having to do with policy. But I have more.

One thing I think has been indicated throughout this conference by the things that have been talked about: When we talk about policy, we have to be practical enough to look at what the States and local communities can do, and what they are not able to do. Then the national policy should impinge on helping them to do the things that the Federal government sets as its priorities.

I think that one of the things that impinge on National policy would be a policy relating to helping States and local agencies with their support services. This is an area that the States have the most difficulty in. Getting money and appropriations for this purpose is so very important in terms of developing quality programs, for such things as curriculum planning, supporting a labor-market information, and supply/demand situation; also the matter of guidance and career planning. I think that if this country is going to develop policy implications, these types of things certainly need to be considered.

I think that everyone recognizes the implication for some type of policy regarding helping States and local communities to develop training programs that relate to the support of the new technologies. Obviously we are going to be in a period of change for a number of years. I think that policy implications can change, but at the present time it certainly seems like this is an area in which some type of policy should be developed at the national level.

I think also that we need to develop some kind of a policy statement which relates to helping local training agencies get state-of-the-art equipment for training.

Now there are a lot of implications in policies for this. Some of it would relate to better means of giving tax breaks to industry that provide that equipment to the training agencies. I think that it's not possible to expect industry to provide all of the training and equipment. I think that at least matching funds for training equipment to help them get state-of-the-art training equipment would be appropriate.

Obviously, from all that's been said throughout this conference, something needs to relate to the training of displaced workers, in a more viable manner than it is at the present time. I think that if you analyze the problem of displaced workers, there is little reason to train a person for a job that doesn't exist. We have to recognize that if a worker will not move from the location where they have been displaced from a job, that if there are not jobs in that locality it is going to do little good to train them to stay in the place where there are no jobs.

The question then comes up, if they are going to move, who trains them? Does the sending community train them, or the receiving community train them? It is not very practical that the Detroit area is going to spend their funds in retraining people that are going to be exported to Oklahoma, Texas, or some other location. So I think that needs to be addressed and how funds are allocated for training of displaced workers.

If you've read the study, "Education for Tomorrow's Jobs," I suggest you reread it. If you haven't read it, I suggest you do. It is a recent study by the National Research Council. I happen to be one of the panel members on that study. I think it is to vocational education what a number of studies have been to public education.

I would suggest that you read it. To give you some idea of the things that this panel related to. I might tell you that the majority of the panel did not come from vocational education, the majority came from other areas. Industry and research institutions, and major economic development firms were a part of that panel.

One of the things identified in this study is the greatest barrier in terms of education relating to industry immediate need for training programs is schools are saddled with capitation grants, which means they get paid this year based on what their daily average attendance was the previous year, which means that a school is limited in what it can do immediately to address the problem.

I am saying that there isn't any way that education can really relate to industry if it has to wait a year and go through the legislative process to get more funds in order to address the need of an industry or group of workers.

To summarize, I think a policy which relates to providing funds that have flexible application at the state and local level is an absolute. I think also that we need a policy statement which relates to research. It is my suggestion, coming from the field, that we need a great deal more research relating to the needs of the field, that they have identified, that is more action research than pure research oriented.

I think that these are the types of things that we need to relate to. I want to congratulate the National Center for using as much of their funding as they possibly can to doing research that has been identified by the field. That seems to be in conflict with what some people who are in pure research think. If we want research to really relate to the needs and if it can be used to improve vocational education training programs, it's got to be this type of research.

Thank you.

MS. DWYER: Thank you, Dr. Tuttle. We'll now hear from Wally Vog.

MR. VOG: When we talk about the future, about vocational education and employment training, as we have in the last two days we've heard almost all the kinds of things that we need to go ahead and do what we know we are supposed to do anyway; but I think it is absolutely essential that meetings like these are conducted.

I'm not particularly akin to the people like Ralph Bregman who do so well in analyzing what we really should be thinking about. I have a tendency to be at the other end trying to get the stuff out so that we can, can use it. We need the Ralph Bregmans and the Morgan Lewises of the world as much as they need the kind of technicians that we as executive directors happen to be.

It takes the whole group of different kinds of people interested in making sure that the citizens of this country have it better than we had it.

One of the things that I really worry about is that some of the people that we deal with every day forget who is out there. The people out there haven't changed a whole lot in range of intellect, of emotions and I am so glad Vernon brought the part up about the loving skills, because that's very important to life.

I've been in the high school and grade school classrooms recently--that's part of my profession--and I haven't found a different kind of kid than when I was in school, maybe more of them. We should have a national policy as Dr. Tuttle has indicated. Maybe this meeting will be the genesis of another organized attempt to bring that about.

I do want to thank the National Center and the National Council and those other groups that took the time, the effort, and the energy, and George Fellendorf in particular, to put this conference together, because it is important that we do talk about the future, and maybe something will come of it.

We do have some very good things going on all over this country. I happen to be very pleased with the types of things that are going on in New York at the present time in vocational education, leading the rest of education if you will. Their curriculum development project, we called it Futuring, but it is a future look at the way education, vocational education, should be delivered, with the heavy input from business, industry and the lay public.

There is no doubt about it that we have got to start earlier in our formal education process to get people aware of what is available in the world in the way of careers, and jobs and so on. In fact, I remember real well an incident that happened that--I guess I remember it so well because I did not like it. It was almost the antithesis of what Jean said about we've got to keep the work ethic going in this country because that's what makes our society.

I heard a national leader a few years ago, in fact the national leader of career education, say that there are a lot of kids that will never have to work.

I think we have excellent teachers in this country, especially vocational teachers. I worry a great deal, though, about our administrators.

I think that the best way to develop basic skills that will last in the current generation and future generations--is not to lessen what we've learned about vocational education and what those wonderful teachers out there are doing, but to make sure that every child and adult in this country has some vocational training.

Thank you.

MS. DWYER: Thank you, Mr. Vog.

Ladies and gentlemen, we now have 30 minutes of your participation. We really are asking for your participation; we want you to join us in this. You may ask questions to any special panel member, or the panel as a whole, or among yourselves if you have some question you'd like to ask each other.

We would ask that if you do have a question, would you please identify yourself and the organization you are with and use the floor mikes that are here. We'd like to start. Go ahead, please.

MR. HARRISON: Hello, my name is Bob Harrison. I am really here by accident. I was just informed of the conference a couple of days ago. Let me just tell you a little bit about why I'm here and I just want to make a comment to all of you who are professionals in the vocational education field. Right now I am an independent consultant to the mayor's office, focusing on correctional problems, criminal justice problems. I am sure you are all aware that vocational training is a very important part of corrections programming.

We know that 95 percent of the people that we have in our correction systems do come back to the community. They have come through the school system to some degree, and they haven't been able, by and large, to succeed in that system or through that system. It is important, I think, for those of you who are professionals in this field, to elevate the image of vocational education. It is one of the things that corrections must use to try and reintegrate people into the community and to free society, to live positive and productive lifestyles.

I want you to understand that, at least in my opinion, corrections cannot elevate the image of vocational education. I think that if you, the educators, and you, the private industry people, can elevate vocational education, it can help us all deal with the problem that we have of rehabilitating people so that they can live a productive and positive and contributing lifestyle. I just want to make that point to you.

MS. DWYER: Thank you very much, Mr. Harrison. Would anyone on the panel like to respond to anything that Mr. Harrison said?

MR. VOG: Only to say that we hear that on the councils everywhere we meet and I think we have to be reminded of it. It seems to be one of the cruxes of the problems that we have and--it comes up in that report that Francis referred to, Education for Tomorrow's Jobs. One of the conclusions was that it's still second man and it is still viewed as something less than what we call traditional true education and we have a great job ahead of us nationally.

MR. BROUSSARD: I think that in terms of our response first of all with regard to enhancing the image of vocational education, I can empathize and understand precisely what you are saying. Whether it is in a correctional institution, or whether it is positive in a secondary school in the suburbs, or in the inner city, or some highly concentrated area of low income persons in Appalachia--vocational education essentially is viewed in that fashion and it is even viewed in that fashion by vocational educators.

They will say one thing, for the most part, on a platform such as this, but if you ask them what course of study are their children taking, and are their children going on to four-year colleges and universities, the majority of them, that's where their children are going. Their actions speak louder than words in that regard.

I would say to you also, one of the things that we have to do--and you can maybe have some influnce in that regard--that is we have to define what we mean by vocational education. You see, when you talk about vocational education at say the 7th, 8th or 9th grade levels--it's wood shop, metal shop--it's considered a dumping ground, pervasive whether one goes to the inner city or one goes to suburbia or wherever, and so that's where that negative image comes from.

When you talk about the crafts areas, whether it has to do with hydraulics, electronics, lasers, et cetera, then the people who go into those areas don't carry that stigmatism to that extent; at least that's been my observation. Those are professional technicians and they are paid accordingly.

The unions are indeed closed to many Americans. If you look at the kinds of individuals that are permitted to go into those programs--and I have done an extensive study for the Rockefeller Foundation in this regard so that I am not speaking just from some personal observations on the matter--the individuals who go into that, who are committed to go into those fields even today, are highly selective individuals. They are certain individuals in terms of their behaviors, in terms of their test scores, their intelligence, whether or not this is a good kid or belongs to a certain ethnic group, racial group, et cetera, you are not allowed to go into those particular programs or that you may find one or two.

So that is why oftentimes the poor community, the minority community, oftentimes will view vocational education, and to some extent the large "mythical" middle class community, will view vocational education in a negative manner because of the fact that it has to some extent been attached to the labor that the forefathers did in the steel mills, excepting they wanted a better life for their children.

I hope I'm not confusing you with that response but I felt compelled to respond to that because it is a question we are constantly being asked. But once again, I would say is, to look at the occupations specifically in terms of vocational education and what the pay is per hour for that particular occupation, dental technician or whatever it may be.

MS. DWYER: Thank you very much, Vernon.

MS. WOOD: I'm Marcia Wood and I'm from Colorado. Most of my vocational experience has been there, but I've had a background in communications as well, and I've been thinking about this second class image a long while and there are two or three specific things that I think we might toss out that might be used. One of them, because we are in touch with businesses, let's include contact with their advertising people because they spend most of their educational money on advertising about their products. There are a few companies who feature workers at all levels. It comes to mind some of the Coors ads and some of the Union Pacific ads I've seen that really highlight workers of all kinds and that is part of the American image that we don't see.

Then in just some of our systems, I had a friend who was the first paraprofessional school social work aide in the Denver public schools, and one of his first assignments was helping with elementary school field trips. Because he was Chicano, he felt that none of the field trips ever really related to the interests of the kinds he knew in the neighborhoods, so he asked to be a part of planning the field trips and he changed it so that they didn't just get managment prospective, the quick glossy tour, but that these kids had chances to talk with the workers in every kind of job, so that they could have some feeling of pride, of every kind of job.

There are some simple things like that that I think if we just think a little harder and somehow breaking the thoughts apart a little bit like Sue Lerner talked yesterday, that we can think of specific ways to ask the companies we work with to feature workers. I think we do in vocational education, in our teacher training and everything else. We tend to focus most on the jobs that pay the most and we don't devote much of our attention to appreciating the skills in what we call bottom-level jobs. I think if we as an educational agency don't believe that all work is worthwhile, how are we going to expect that our country will absorb and continue that attitude. That's just a general thought that I think we really need to bring up and discuss more.

One other specific thing that we have tried--and I was talking about it with someone here in some training for adult programs--we have some little blue plastic badges made that identified all these women as being in SCU Human Services Occupations Training. You can't believe the amount of pride and spin-off in contacts that were made by the people wearing this badges. Some of the women wanted to wear them all the time, but some of them had great problems because their kids wanted to wear them to school too because their mother was in this special program and had this badge.

There are other kinds of simple things--I even believe that when we have students in training in co-op programs and others, we should use some of our own facilities to help see that every student coming in gets a personal card printed that tells what kind of a training program they are in; because a lot of people in our society do identify the people who are somebody with who has a card to hand out that tells what they are doing and, whether it includes their area of interest or what company they are working with in co-oping, I think there are simple things we can do to help give that. It wouldn't be that impossible, but it might be something the National Advisory Council could help share ideas.

One other thing that I think does give status is the idea of scholarships. I think that's an additional idea to funding because we all realize we can't do it all through Social Security or ITA or unemployment compensation or whatever and there are a lot of people who, if they can give to a scholarship to help someone who is in the working poor category, who would give a scholarship for tuition and could. Just the very fact that you quality for a scholarship is also a thing of pride. I think sometimes just knowing the people I know who don't want anybody to know they are on any kind of public assistance, but who responded to a program that had a training institution's name, we got lots more response and lots more participation.

I know that's maybe shooting your wad all in one direction, but those are specific ideas that I think we need to take the time to think through.

MS. DWYER: Thank you very much, Mrs. Wood.

I see a young lady in the back, please go ahead.

MS. ANUNZIO: My name is Annette Anunzio. I'm with Phillip Moris, Incorporated. This goes along with the idea of giving recognition to those students who are vocational educationally oriented. What Phillip Morris has, and we've had now for ten years, is a vocational technical scholarship award program for our employees' children. It is given the same amount of treatment as a college scholarship program is and, as we celebrate the tenth anniversary of the program, we know as one company, we can't reach everyone, so we are going out now and encouraging other corporations to sponsor similar programs.

We did a survey of our students who had gone on with these awards and a lot of responses included the fact for once we were recognized as being important. They liked the fact that this was termed a scholarship and that finally they were being awarded for their merits as were those students going on to college. We're proud that the program has grown in the ten years and we hope that other corporations will take our lead and start the programs up in their companies as well.

MS. DWYER: Thank you very much. We most certainly do too, we appreciate your sharing that with us.

MR. DOLAN: I'm Gene Dolan. I was up here yesterday, from the University of D.C. and also from the Data Processing Management Association. I have two points I'd like to make. The idea of identifying gifted and talented children, the thing has been alluded to but not directly. Basically, one of the things that we tend to do with these identified people is we thrust them into essentially more schooling on the intellectual side and I know from experience, very personal experience as a matter of fact, that some of these students aren't interested in more history, more art, more music; they are interested in doing things with their hands, specifically vocational education-type things.

I think the advisory committees particularly have to get together with the gifted and talented people in education to work out some way of identifying students who are "gifted and talented," so that we don't turn them off as students by thrusting them into areas where they are not interested in going.

The second point which I think advisory committees ought to do and also industry people, is we have to start getting off the trend, which I am noticing over the past several years, of entry level positions--I should put that in quotation marks--being positions which require the applicant to have experience. This is particularly true in highly skilled areas.

Very many of the people coming out of vocational schools, junior colleges, and community colleges with no experience are incapable of getting jobs, though the jobs are there--the market is crying for people--because industry won't hire them because they don't have experience and they can't get experience because industry won't hire them.

This is particularly true in my field, in the computer field. You see the ads all the time--three years experience as a COBOL programmer. You can't get it until you are hired to be a programmer. I think we have to get this message across as well.

MS. DWYER: Thank you very much, sir. Either one of you gentlemen?

MR. MORGAN: I'm Bob Morgan. I work with the National Center for Education Statistics. I have a few comments that don't necessarily reflect departmental position, but are of concern to me since I haven't heard any discussion of them.

I think one major area that needs to be addressed is a geopolitical basis for planning. I hear some of the speakers talk about local planning and local involvement, yet others, State level and State involvement, and even some at the Federal level, with Federal involvement.

If you look at supply and demand from a local perspective, you get a different picture than what you would get in a national perspective. It may not even be cost-efficient to put up certain types of high tech programs, from a local perspective or even from a State perspective, when there is needed employment at the national level. These are the cutting-edge occupations. I think that the council should address how we look at the more limited areas of high tech preparation, the support people.

For example, the Association of Engineers have been very concerned about how they're going to get the support technicians to help in a wide variety of areas of training. The second area that causes some concern is the coverage of State plans. State plans naturally cover a variety of different areas of within a State. Some States have every educational program in their State planning process, yet others have whole segments of their educational delivery system not covered in the formal planning process.

Another area of concern is the criterion for success for vocational education. The majority of vocational education, at least in terms of the people served, is occuring in areas that are designed to impart specific job skills and abilities. I have not heard any talk of that. There has been some talk about a split betwen secondary and elementary in terms of a delivery system, but I haven't heard very much discussion about the postsecondary level, which is a growing area, or the adult area.

The other area that I heard, and it kind of concerned me a bit, but it is maybe a picture of the things to come as the gentleman from GM was speaking about, the active effort to select the best qualified. Now, in our current act, we have two different types of criterion for success; one is the number of people placed in related employment; and yet the other is services to target populations. There needs to be looked at the balance between these two, sometimes paradoxical goals.

Yet another area is the concern for quality guidance. Dr. Schwartz, noted the need for quality supply data. We do have a great need in that area and we need to bring together the sources that we have. Our agency has difficulty bringing together the varieties of educational supplies; nevermind that outside the educational sector and the area of industry training.

And of advancing another area of concern is the decreasing number of jobs available in the higher trained areas and the increasing low-skill jobs available. I think that really deserves special attention because it is coming more and more wide-spread from our perspective.

Finally, I think some attention ought to be paid to the technology that the gentleman from GM was talking about. Clearly the day is coming where the change, the technological change, is going to be so quick that we cannot disseminate it or diffuse it. This notion of an interactive computer linkage across the United States where you can spend your curriculum development money more effectively and update more quickly, I think ought to be looked at.

Thank you.

MS. DWYER: Thank you very much, Bob. I think you raised several very valid questions and concerns. Does anyone on the panel wish to respond to any one of the questions that Bob brought up, or the concerns?

Okay, fine. Next question, please. Sir?

MR. CANNING: My name is Ed Canning. I am a director of apprenticeship in the Western Connecticut Carpenters, in Connecticut. I wanted to bring up a couple of points. It is kind of a rarefied atmosphere we've had here and looking at vocational education from the demand side and from the outside, and I find it rather difficult to cope with. I am looking for applications. I am involved also with Vo-Tech schools in Connecticut and the craft committees and what-not, so I have a strong interest in it.

One of the things I've noticed is that the students that we receive that come into the union, and we have an open-door contrary to Mr. Broussard's findings in other places--the youngsters who do come in are allowed in and allowed to register with us, and we find that the majority of persons who come in to be carpenters are not from the technical schools. Very few proportionately to the number who come in, very few are from the technical schools.

Most of the youngsters who are coming in through our doors are people who have completed high school and who have tried out something. They may have tried going to a service station to work, working in a store, any number of small, allied occupations, and then come in because they have found that there is no place for them to go--there is no craft, there is no future, there is no career.

We work with them, take and work with them, which makes me wonder about the Vo Tech system. We have an excellent Vo Tech system on the books in Connecticut, but it is very separate. It's like an enclave. There is a selection process to go to any one of the Vo Tech schools; but it is really not diffused into the community.

More and more youngsters at the same time, who are going through out public high schools, are unable--are not intending to go to college. They need to develop some skills that are going to give them a career.

I understand from one of the gentlemen at the conference that at the local area they have a series of career centers, where people can come to work part-time in their regular high school and part-time at the career center. This to me would make a little bit of sense--changing the system to meet the needs and desires of the people.

The other thing I would suggest is that in our thinking, in our planning for policy, that you take a little more of a look at apprenticeship. I have a vested interest in apprenticeship, having 211 apprentices on my own all over the state of Connecticut.

The system is an excellent system from this point of view. You have a young man working all day long and he is working beside a journeyman carpenter. He is working under a foreman who is yelling at him, making sure he is there on time. He is working with a journeyman carpenter who is helping him to do the trade. At night-time, he comes to school twice a week and he has a man from the trade who comes into the tech school and we have a separate facility where they do projects. And this man is a superintendent, a foreman, or a journeyman carpenter, who teaches him at night-time; and he is working, he is current with what the needs of the trade are. He is showing him what has to be done and they know the next day he is going back to a job just like them.

It is extremely effective. The problem I see with the school system in developing vocational abilities and strengths is we find that the youngsters do not have a sense of immediacy. They do not have a sense of the needs of the job skills that are on the job. They are in the school syndrome of getting the pink slip which excuses being late. There is no accountability and there is not feeling that this is for real.

Perhaps there should be thought of tying together the Vo Tech with the job. I know cooperative education jobs work has been rather successful, but on a larger scale, perhaps if Vo Tech schools also could be tied in closer to the other high schools.

Thank you. I'm sorry I talked so long.

MS. DWYER: Thank you very much, sir.

There is a gentleman up above. Would you please go ahead?

MR. PENROD: I'm Walter Penrod. I'm the Executive Director of the State Advisory Council in Indiana.

I think we have a dire need in this country for a policy which says that education is for all and it includes all. I sense a very strong trend, particulary from the national level, to separate education into a series of track systems--some of those who have certain kinds of things and certain other kinds of things.

It seems to me that we have a prime purpose in education and that is preparing the individual to be a productive and contributing citizen in our society, as at least one of the major purposes of education. And I sense that we sometimes have a track that we might call vocational education and a track we call general education and a track that we call academic education. But where they seem to get their authority and get their direction seems to vary.

It seems to me we have a real strong need for a policy that addresses education for all and a policy that has a direction toward a goal, which means a more productive society using our most valuable resource, the human resource.

MS. DWYER: Thank you very much, sir.

MR. BALDWIN: I am Steve Baldwin on the staff of the National Commission for Employment Policy. These remarks however are my own as a professional economist and not to be interpreted as those of someone who has paid for the microphone.

The Commission has, over the last several years, devoted a considerable amount of its resources to studying vocational education. We put out a report in 1981 with some recommendations. Among those were that federal funds should be directed primarily toward furthering innovative programs and attempts to improve vocational education programs, rather than the federal funding going to maintain the average vocational program. We did this in part on the basis of some economic studies done for us by both outside consultants and some of my colleagues which indicated that on average, form the point of view of improving earnings, secondary vocational education in particular did not represent an earnings gain over general track high school education.

I think that over the last several years that I have been following this issue, vocational education as a system has moved a long way toward recognizing a number of its shortcomings and attempting to move toward correcting those shortcomings.

One problem that the vocational educators really can't handle by themselves is this issue of labor market information and forecasting. One of the reasons why they can't is because employers, by and large, don't forecast their own labor needs very well.

One possible suggestion to perhaps get some better information on this is to utilize the advisory committee structure, which is supposed to provide information from the businesses whose representatives are on the committees, to the school districts, the LEA, might be able to turn the binoculars around sometimes and provide some information on trends from the point of view of labor market development, to the employers themselves. They may just not be as aware as they need to be of some of the labor market factors that they are going to have to face over the next 10 to 15 years.

With respect to the issues of montoring and looking at programs for retraining of both disadvantaged workers and displaced workers, the Commission has what we call a practitioners' task force, composed of about 18 or 20 individuals who are program operators around the country. Ed Canning is one of our practitioners' task force members, as a matter of fact. I'm sorry I blew his cover. But that kind of structure has enabled us to pick out problems as the Job Training Partnership Act has been developed and implemented. It is now approaching the start of its first full program year.

I am not sure that there is a comparable kind of structure in place with respect to vocational education. The advisory councils, it seems to me, are getting information from the community to the educators. Is there much feedback from the educators, the educational community, to the employers and the policymakers? We do it in this kind of a conference, but this is a sporadic affair. I wouldn't want to suggest we do a conference like this every three months, for instance. I like Ralph too much to do that.

The issues of displaced workers and unemployment insurance--I do want to mention that because it is an area that I have had a lot to do with in the last couple of years--having to do with whether we should require retraining be taken by individuals on unemployment insurance. You have got to remember, the unemployment insurance system is a social insurancy system designed to maintain purchasing power for individuals who are in most cases unemployed for relatively short periods of time, either between jobs or awaiting recall.

It is only when you get into situations of individuals who have long-term unemployment and difficulty in finding new jobs that we then have to think about, how are we going to make them more employable. The suggestion that I and a colleague had advanced in a paper that we wrote last year, at the request of the Senate Budget Committee, is, we develop linkages between the unemployment insurance system, the vocational education system, and the JTPA structure, so that we can get people in for assessment, if it seems likely that they are going to have problems. Get them in for assessment early-on, and as an incentive perhaps provide extended unemployment insurance conditional on their participating and remaining in a retraining program.

That's not going to appeal to anywhere near a majority of the unemployed, but it is going to be a way of getting at the minority of the unemployed who are likely to be seriously, structurally affected.

Finally, there is a second--or maybe a third, or fourth by now--range of issues that this conference really has not addressed except perhaps tangentially and that's the general area of women's issues. I can think of two that I would urge that there be some integration between vocational educators and academic educators working in the same school systems to address.

One of them is, we have been talking a lot about the need for individuals to have mathematics skills inculcated in them at early ages. A substantial body of research, I believe, has indicated that girls tend to have what is called math anxiety to a greater extent than do boys, and that sometimes it is necessary to provide extra treatment or at least avoid stereotyping girls as being nonquantitative and nonmathematical, in order to draw out their latent abilities.

Both vocational educators and academic educators, it seems to me, should be cooperating in areas where we are talking about providing the kinds of tools that people are going to have to use to make a living, including the math skills, on a nonsexist basis.

The one experience that I might pass on, one of my colleagues has been looking at educational-employment linkages, employer aid to schools in various parts of the country, went up to what is in effect a model high school, vocational high school, in New York City, which focuses on electronic occupations--I forget the name of it--4,000 kids, all boys.

The second area in which I think both vocational educators and academic educators can cooperate with the ultimate object of improving girls' life chances in the labor market has to do with the problem of teenage pregnancies and sex education. I don't know how to do that. That is certainly not my area of expertise, but it certainly seems to be an area in which some fairly straightforward facing the facts needs to be done, and we should be thinking in terms of how a vocational education model might have particular advantages to girls who may be particularly prone to teenage pregnancies.

Okay, I'll stop there.

MS. DWYER: Thank you very much, sir. As a guidance counselor, I can personally say there are many things you have said that I understand very, very well, in a vocational school.

I think we have time for one more. Sir?

MR. LARKIN: I am Paul Larkin, former futurist. I am saying that in the spirit of--Art Buchwald's column, I think maybe many of you know it, Capitol Punishment--and at least a few of the things I have been hearing at a level of interchange of ideas is that we don't need futurists at all. In fact, they are a pretty scary bunch to be around. We really ought to get on with the practical, immediate stuff and avoid possible reference to scenarios concerning the future.

I think in the same vein I have heard some anti-intellectualism expressed here and I would like to join the whole group and be a former intellectual and we can all attact them for any ideas.

I was impressed by some of the ideas submitted about the intrinsic worth, the self-worth of some of our human clients, vis-a-vis the employer. I was glad when I perceived some applause for getting it on the table here that our vocational students are valuable.

Yesterday, we had it on the table that half the people in South America are under 19 years of age and in the next 20 years, if we generated four million jobs a year for them, we'd just about stay even; and the United States, with five times the economy in the past ten years has only generated two million jobs a year.

I also think of people in our prisons, that's been mentioned, and how they have been deprived of a role. I am not talking about jobs. I am talking about roles. And people on welfare in Baltimore, the same way. We have handed them material things and taken away from their spirit, their ability to participate in the economy and in our society. I submit that as an issue which calls for policy. I think we have been doing better lately and I would defer to George Fellendorf about our handicapped people, and we have been showing some greater respect for them as persons, for their work, as opposed to their value to, their extrinsic value to an employer.

So. my idea is that--again remember, this is Capitol Punishment--is that something along the model of our football stars, who can command multi-million dollar salaries, that for each of their vocational students, we arrange for there to be a lawyer respresenting them. Here we could let go of all of our vocational policy since 1917 and take a more individual approach. This would give abundant activity for lawyers to do, get them to do something else beside representing my ex-wife.

The basic concept here is a caring about the individual, though, and a trying to empower that individual. I fear that I've heard more than I like to about preparing people to be workers in factories, that kind of thing; an insensitivity to women; an insensitivity to the Indian peasant, even in South America.

How can we provide roles? I don't think it will be factory roles and I haven't heard enough discussion of positively what would it be. I feel that's the challenge of this conference, is to identify roles. We used to do it in our industrial society. I heard a young lady being introduced from the Future Homemakers of America. With the stay-at-home, mother, and housewife, in the industrial society, we provide a woman a role. How are doing it in this society? What is our challenge for the end of the 20th century, the beginning of the 21st, to empower, to provide roles? I would like to hear coherence of ideas that will address that issue, about roles.

MS. DWYER: Thank you very much, sir.

Mr. Fellendorf will close this session. On behalf of the panel and on behalf of myself, I think you have been a great audience. You have asked most provocative questions. Your concerns, we are very aware of and appreciate your voicing them. Your comments, we appreciate.

And I would also like to thank the panel, starting with Mr. Fellendorf; Dr. Broussard; Wally Vog; Dr. Tuttle; and Dr. Hanson. Thank you very much.

I will turn it back to Dr Fellendorf.

MR. FELLENDORF: Thank you very much, Joanne.

Looking at the program at 2:15 we were to have closing remarks by Mr. Miller and Ken Smith. I am not sure that I see either one of the here. Is there anyone who is going to speak for them?

If not, I didn't really give up my five minutes to give a final address, but I guess I do have the opportunity and the privilege of thanking you all for coming, to assure you that what has been said, both from the platform and from the audience has been dutifully taperecorded for transcription and review and thoughtful inclusion in the proceedings of these sessions. I hope you are all registered too so we know who you are and are on the mailing list to hear about the proceedings, when they become available.

I think that it's been a very stimulating day-and-a-half and I have learned, myself, a great deal by listening to the comments that were made, from here and from the audience. I think that the National Advisory Council and the other organizations which have shared in sponsoring these sessions have fulfilled a major portion of the anticipated goals.

I appreciate that Paul mentioned that we didn't touch on certain things that are of particular concern. I could say that with respect to the handicapped and disabled--that's my particular concern--I would say that while that hasn't been mentioned as specifically as I might have liked, I have been listening to what's been said and interpreting much of what I've heard in light of the particular population that I am concerned about. So I hope every one of us has done the same thing.

I'd like to thank again Ralph Bregman and Morgan Lewis and those on their staffs who have helped make this all possible.

We appreciate your coming and wish you a safe journey home. Thank you.

(Adjournment of Proceedings)

AGENDA

MARCH 15, 1984

8:00am Registration
Main Entrance
Department of Commerce

8:45-9:15 Welcome and Conference Overview
Edward D. Miller, Conference Chairman and
Chairman National Advisory Council on
Vocational Education
President and Chief Executive Officer
Future Business Leaders of America/
Phi Beta Lambda
Washington, DC

D. Bruce Merrifield
Assistant Secretary for Productivity,
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Kenneth M. Smith, Chairman
National Commission for Employment Policy
President and Chief Executive Officer,
International Management and Development Group
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James W. Griffith
Executive Director, National Advisory
Council on Vocational Education
Washington, DC

9:15-11:45 Topic: Trends and Changes in Federal, State and Local Governmental Roles During the Remainder of This Century

Moderator: George W. Fellendorf
President, Fellendorf Associates
Silver Spring, MD

9:15-10:00 Speaker: David B. Walker, Assistant Director for
Governmental Structures and Functions
Advisory Commission for
Intergovernmental Relations
Washington, DC

10:00-10:30 Break

10:30-11:10 Panel-Reaction and Comment

K. Edwin Graham
Director, External Relations Projects
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Jack A. Griffith
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Washington, DC

11:10-11:30 Panel Discussion and Interchange

11:30-11:45 Audience Question and Answer Period

11:45-1:00 Lunch

1:15-4:00 Topic: Social and Demographic Trends and Changes
During the Remainder of This Century

Moderator: Vernon Broussard
Associate Professor
University of Southern California
Los Angeles, CA

1:15-2:00 Speaker: Sue G. Lerner
Director Corporate Planning
Edison Electric Institute
Washington, DC

2:00-2:40 Panel-Reaction and Comment

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2:40-3:00 Panel Discussion and Interchange

3:00-3:30 Break

3:30-3:45 Audience Question and Answer Period

4:00 Recess

MARCH 16, 1984

9:00-11:15am	Topic:	Trends and Changes in the Economy During the Remainder of This Century
	Moderator:	Jean Hanson Convergent Systems, Inc. St. Paul, MN
9:00-9:45	Speaker:	William P. MacKinnon Vice President Personnel Administration and Development Staff General Motors Corporation Detroit, MI
9:45-10:25	Panel--Reaction and Comment	

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Francis Tuttle
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Stillwater, OK

10:25-10:40 Break

10:40-11:00 Panel Discussion and Interchange

11:00-11:15 Audience Question and Answer Period

11:15-12:00	Topic: Public Policy and Communication
11:15-11:45	Speaker: Robert S. Goralski Writer and Lecturer Washington, DC
11:45-12:00	Audience Question and Answer Period
12:00-1:00	Lunch
1:00-2:15	Panel--Analysis of Policy for Vocational Education and Training
	Moderator: Joanne Dwyer Guidance Counselor Dauphin County Technical School Harrisburg, PA
1:00-1:45	Panel: Vernon Broussard George Fellendorf Jean Hanson Francis Tuttle
	Wallace Vog Executive Director New York State Advisory Council on Vocational Education Albany, NY
1:45-2:15	Audience Comments on Policy Requirements
2:15-2:30	Closing Remarks
	Edward D. Miller Kenneth M. Smith

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